YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT
1947 Galileo Court, Suite 103, Davis, CA 95618
(530)757-3650

PROPOSED - TITLE V PERMIT RENEWAL STATEMENT OF BASIS

PERMIT NUMBER: F-05409-2

ENGINEER: René Toledo

DATE: November 10, 2010

Facility Name:	CalPeak Power - Vaca Dixon, LLC
Mailing Address:	7365 Mission Gorge Road, Suite C San Diego, CA 92120
Location:	5157 Quinn Road (PG&E Vaca-Dixon Substation) Vacaville, CA 95688-9452
Responsible Official:	Jeff Paul
Title:	General Manager
Application Contact:	Ramiro Gonzales
Title:	Site Supervisor
Phone:	(619) 229-3770

I. FACILITY DESCRIPTION

CalPeak Power - Vaca Dixon, LLC operates a simple-cycle peaking electric generation facility. Electricity is generated by an FT8 Pratt & Whitney Twinpac consisting of two (2) gas turbine engines and one (1) 49.5 megawatt generator. The exhaust from the gas turbines is combined to drive the generator, and therefore, controlled by a single selective catalytic reduction (SCR) control system. The plant is considered a "Peaking Unit" since it operates primarily to supply additional electricity to the electric grid during periods of high power demands.

II. INSIGNIFICANT EMISSIONS UNIT INFORMATION

Insignificant emissions units or exempted equipment may be supplemented, replaced or modified with non-identical equipment without notice provided exemption status has not changed as defined in current district or federal rules. The equipment listed in Table 1 is a partial listing of equipment currently identified as exempt or insignificant and not required to obtain an operating permit pursuant to District Rule 3.2 (Exemptions).

Table 1: Exempted and Insignificant Emissions Units

Insignificant Equipment Description	Basis for Exemption
Motor Vehicles	District Rule 3.2, Section 101
Stationary Internal Combustion Engine	District Rule 3.2, Section 105.1
Repairs and Maintenance	District Rule 3.2, Section 108
Misc. Storage and Transfer Tanks	District Rule 3.2, Section 109
Surface Coating and Preparation	District Rule 3.2, Section 110
Other Miscellaneous Equipment	District Rule 3.2, Section 113

III. SIGNIFICANT EMISSIONS UNIT INFORMATION

Each of the sources has been constructed pursuant to issuance of an ATC in accordance with District Rules 3.1 (General Permit Requirements) and 3.4 (New Source Review).

Identification Number: **P-44-02**, Emergency Internal Combustion (IC) Engine

Equipment Description: 60 BHP diesel fired John Deere IC engine, Model No. JU4H-UF20, Serial No. PE4045D181225, Model Year 2002, Non-Certified Engine

Control Equipment: None

Identification Number: **P-45-02(a1),** Utility Power Generation

Equipment Description: Pratt & Whitney FT-8 Twin Pac unit, consisting of two (2) natural gas fired, simple cycle, combustion turbines (500 MMBtu/hr total heat input), Serial No.'s P728615 and P728616, driving a common generator (nominal electrical output 49.5 MW at ISO conditions)

Control Equipment: Dry low-NO_X combustors, Haldor Topsoe Selective Catalytic Reduction (SCR) system, Englehart oxidation catalyst, and a Continuous Emission Monitoring System (CEMS)

IV. TITLE V APPLICABILITY

On September 1, 2009, the source submitted a complete application for permit renewal. Although the facility's potential to emit does not exceed the Title V emission thresholds for the criteria pollutants, the source is subject to the requirements of District Rule 3.8 (Federal Operating Permits). Section 102.2 of Rule 3.8, requires that any source considered an "acid rain unit" subject to the requirements of Federal Title

IV permitting, be permitted under the District's Title V Program. The facility's amended emission totals are listed below in Table 2:

Table 2: Total Criteria Pollutant Emissions

Criteria Pollutant Emissions (tons per year)					
Emission Unit Name	**VOC**	**CO**	**NO_X**	**SO_X**	**PM_{10}**
P-44-02	Negligible	0.01	0.08	Negligible	Negligible
P-45-02(a1)	5.10	26.78	14.66	5.02	11.83
Total	5.10	26.79	14.74	5.02	11.83

V. APPLICABLE FEDERAL REQUIREMENTS

RULE 2.3 Ringelmann Chart

Rule Description

This rule specifies the allowable opacity limit for sources in the District.

Compliance Status

The rule applies to any visible emissions at the stationary source. The version of the rule used in this evaluation is the rule adopted on October 1, 1971, and is part of the California State Implementation Plan (SIP). The source is currently in compliance with the requirements of the rule.

Rule Requirement #1 - Opacity Requirement

The rule limits the opacity of any visible emissions from the emergency engine of P-44-02 and the two combustion turbines of P-45-02(a1), and is a standard "Facility Wide Condition." The rule reads:

> *"A person shall not discharge into the atmosphere from any single source of emission whatsoever, any air contaminant for a period or periods aggregating more than 3 minutes in any one hour which is:*
>
> *a. As dark or darker in shade as that designated as No. 2 on the Ringelmann Chart, as published by the United States Bureau of Mines; or*
>
> *b. Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection a. of this rule."*

Facility Wide Permit Condition

The Permit Holder shall not discharge into the atmosphere from any single source of emission whatsoever, any air contaminant for a period or periods aggregating more than three (3) minutes in any one (1) hour which is:

a. As dark or darker in shade as that designated as No. 2 on the Ringelmann Chart as published by the United States Bureau of Mines; or
b. Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in Subsection (a) of this condition. [District Rule 2.3]

Streamlining Demonstration: A streamlined version of this rule is contained in P-44-02 and P-45-02(a1). The language of Rule 2.3, Subsection (b), has been streamlined to explicitly require a 40% opacity limit. The 40% opacity limit is an equivalent quantity of smoke to the Ringelmann No. 2 requirement listed in Subsection (a) of the rule.

Streamlined Permit Conditions

Opacity Requirements for P-44-02 - Emergency Engine

The operation shall not discharge into the atmosphere any air contaminant for a period or periods aggregating more than three (3) minutes in any one (1) hour which is:
a. As dark or darker in shade than No. 2 on the Ringelmann Chart; or
b. Greater than 40% opacity. [District Rule 2.3/C-02-78]

Opacity Requirements for P-45-02(a1) - Combustion Turbines

The Permit Holder shall not discharge into the atmosphere from any single source of emission whatsoever, any air contaminant for a period or periods aggregating more than three (3) minutes in any one (1) hour which is:
a. As dark or darker in shade than No. 2 on the Ringelmann Chart; or
b. Greater than 40% opacity. [District Rule 2.3/C-06-66]

RULE 2.5 Nuisance

Rule Description

This rule requires that the source not be a public nuisance.

Compliance Status

The rule applies to all emission units at the stationary source. The version of the rule used in this evaluation is the rule adopted on October 1, 1971, and is part of the California SIP. The source is currently in compliance with the requirements of the rule.

It should be noted that this permit condition is Federally enforceable because it derives from District Rule 2.5 (Nuisance) that is currently part of the California SIP. The District is taking steps to remove Rule 2.5 from the SIP. Once the U.S. Environmental Protection Agency (EPA) has taken final action to remove District Rule 2.5 from the SIP, this permit condition will become state-enforceable only.

Rule Requirement #1 (Facility Wide Permit Condition)

The Permit Holder shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such persons or the public or which cause to have a natural tendency to cause injury or damage to business or property.

RULE 2.11 Particulate Matter

Rule Description

This rule specifies the allowable particulate matter (PM) emission rate at standard conditions. For purpose of this evaluation, the PM emissions are considered to be 100% PM_{10} (PM with an aerodynamic diameter of 10 microns or less).

Compliance Status

The rule applies to the emergency engine of P-44-02 and the two combustion turbines of P-45-02(a1). The version of the rule used in this evaluation is the rule adopted on October 1, 1971, and is part of the California SIP. The source is currently in compliance with the requirements of the rule.

Rule Requirement #1 - PM Emission Rate

The rule requires:

> *"Except as otherwise permitted by law, no person shall release or discharge into the atmosphere, from any source, particulate matter in excess of 0.3 grains per cubic foot of exhaust volume as calculated standard conditions."*

Subsuming Demonstration for P-44-02: The emergency engine of P-44-02 is also subject to a federally applicable PM emission limits of Rule 2.12 (0.3 grains per standard cubic foot), Rule 2.16 (200 lb/day), and Rule 3.4 (0.4 lb/day). As shown below, the Rule 3.4 requirement subsumes the less stringent Rule 2.11 requirement.

The PM_{10} emission limit of P-44-02 (based on Rule 3.4) is 0.4 pounds per day (lb/day). Using the maximum engine daily operating schedule of 24 hours, maximum engine fuel consumption rate of 3.8 gallons per hour, diesel fuel density of 7.1 pounds per gallon, diesel fuel higher heating value of 19,300 British thermal units per pound (BTU/lb), and diesel fuel F-Factor of 9,220 DSCF/MMBTU, the unit's PM emission concentration is calculated as follows:

= (0.4 lb PM_{10}/day) * (7,000 grains/1 lb) * (1 day/24 hours) * (1 hour/3.8 gallons) * (1 gallon/7.1 lb) * (1 lb/19,300 BTU) * (10^6 BTU/ MMBTU) * (1 MMBtu/9,220 SCF)
= 0.0243 gr/DSCF of PM

Subsuming Permit Condition of P-44-02

The PM_{10} emissions from the emergency engine of P-44-02 shall not exceed 0.4 lb/day, 3 lb/1st calendar quarter, 3 lb/2nd calendar quarter, 3 lb/3rd calendar quarter, 3 lb/4th calendar quarter, and negligible tons/year. [District Rules 2.11, 2.12, 2.16, and 3.4/C-02-78]

Subsuming Demonstration for P-45-02(a1): The two combustion turbines of P-45-02(a1) are also subject to a federally applicable PM emission limits of Rule 2.12 (0.3 grains per standard cubic foot), Rule 2.16 (200 lb/day), and Rule 3.4 (79.5 lb/day). As shown below, the Rule 3.4 requirement subsumes the less stringent Rule 2.11 requirement.

The PM_{10} emission limit of P-45-02(a1) (based on Rule 3.4) is 79.5 lb/day. Using the maximum turbine daily operating schedule of 24 hours, maximum turbine fuel consumption rate of 492,290 SCF/hour, natural gas higher heating value of 1,020 BTU/SCF, and natural gas F-Factor of 8,710 DSCF/MMBTU, the units' PM emission concentration is calculated as follows:

= (79.5 lb PM_{10}/day) * (7,000 grains/1 lb) * (1 day/24 hours) * (1 hr/492,290 SCF) *(1 SCF/1,020 BTU) * (10^6 BTU/1 MMBTU) * (1 MMBTU/8,710 DSCF) = 0.005 gr/DSCF of PM

Subsuming Permit Condition of P-45-02(a1)

The PM_{10} emissions from the two combustion turbines of P-45-02(a1) shall not exceed 79.5 lb/day, 5,916 lb/1st calendar quarter, 5,916 lb/2nd calendar quarter, 5,916 lb/3rd calendar quarter, 5,916 lb/4th calendar quarter, and 11.83 tons/year. [District Rules 2.11, 2.12, 2.16, and 3.4/C-06-66]

RULE 2.12 Specific Contaminants

Rule Description

This rule specifies the allowable sulfur dioxide (SO_2) and PM emission rates at standard conditions. For the purposes of this evaluation, the sulfur oxide (SO_X) emissions are considered to be 100% SO_2.

Compliance Status

The rule applies to the emergency engine of P-44-02 and the two combustion turbines of P-45-02(a1). The version of the rule used in this evaluation is the rule adopted on October 1, 1971, and is part of the California SIP. The source is currently in compliance with the requirements of the rule.

Rule Requirement #1 - SO_X Emission Rate

The SO_X specific emission limit contained in Subsection (a) reads:

"Sulfur compounds calculated as sulfur dioxide (SO_2) O.2 percent, by volume at standard conditions."

Subsuming Demonstration for P-44-02: The emergency engine of P-44-02 is also subject to a federally applicable SO_X emission limit of Rule 2.16 (200 lbs/hour) and Rule 3.4 (0.6 lb/day). As shown below, the Rule 3.4 requirement subsumes the less stringent Rule 2.12 requirement.

The SO_X emission limit of P-44-02 (based on Rule 3.4) is 0.6 lb/day. Using the maximum engine daily operating schedule of 24 hours, maximum engine fuel consumption rate of 3.8 gallons per hour, diesel fuel density of 7.1 pounds per gallon, diesel fuel higher heating value of 19,300 BTU/lb, and diesel fuel F-Factor of 9,220 DSCF/MMBTU, the unit's SO_X emission concentration is calculated as follows:

= (0.6 lb SO_X/day) * (1 lb-mole/64 lb) * (385 DSCF/lb-mole) * (1 day/24 hours) * (1 hr/3.8 gallon) * (1 gallon/7.1 lb) * (1 lb/19,300 BTU) * (10^6 BTU/1 MMBTU) * (1 MMBTU/9,220 DSCF) * 100% = 0.0004% SO_X

Subsuming Permit Condition of P-44-02

The SO_X emissions from the emergency engine of P-44-02 shall not exceed 0.6 lb/day, 5 lb/1st calendar quarter, 5 lb/2nd calendar quarter, 5 lb/3rd calendar quarter, 5 lb/4th calendar quarter, and negligible tons/year. [District Rules 2.12, 2.16, and 3.4/C-02-78]

Subsuming Demonstration for P-45-02(a1): The two combustion turbines of P-45-02(a1) are also subject to a federally applicable PM emission limits of Rule 2.16 (200 lb/hour), Rule 3.4 (33.8 lb/day), and 40 CFR Part 60.333(a) (0.015%). As shown below, the Rule 3.4 requirement subsumes the less stringent Rule 2.12 requirement. For reference, the Rule 3.4 requirement is also more stringent than, and therefore subsumes, the requirements of 40 CFR Part 60.332(b) (see Rule Requirement #3 for 40 CFR Part 60 - Subpart GG).

The SO_X emission limit of P-45-02(a1) (based on Rule 3.4) is 33.8 lb/day. Using the maximum turbine daily operating schedule of 24 hours, maximum turbine fuel consumption rate of 492,290 SCF/hour, natural gas higher heating value of 1,020 BTU/SCF, and natural gas F-Factor of 8,710 DSCF/MMBTU, the units' SO_X emission concentration is calculated as follows:

= (33.8 lb SO_X/day)* (1 lb-mole/64 lb) * (385 DSCF/lb-mole) * (1 day/24 hours) * (1 hr/492,290 SCF) * (1 SCF/1,020 BTU) * (10^6 BTU/1 MMBTU) * (1MMBTU/8,710 DSCF) * 100% = 0.0002% SO_X

Subsuming Permit Condition of P-45-02(a1)

The SO_X emissions from the two combustion turbines of P-45-02(a1) shall not exceed 33.8 lb/day, 2,511 lb/1st calendar quarter, 2,511 lb/2nd calendar quarter, 2,511 lb/3rd calendar quarter, 2,511 lb/4th calendar quarter, and 5.02 tons/year. [District Rules 2.12, 2.16, and 3.4, and 40 CFR Part 60.333(a)/C-06-66]

Rule Requirement #2 - PM Emission Rate

The PM specific emission limit contained in Subsection (b) reads:

"Particulate Matter Combustion Contaminants: 0.3 grains per cubic foot of gas calculated to 12 percent of carbon dioxide (CO2) at standard conditions..."

Subsuming Demonstration for P-44-02: As previously discussed for Requirement #1 of Rule 2.11, the unit's PM_{10} emission limit (based on Rule 3.4, Section 402.9) is more stringent than the 0.3 gr/DSCF requirement of Rule 2.11 and this rule. Accordingly, the PM_{10} requirements of Subsection (b) have been subsumed by the requirements of Rule 3.4.

Subsuming Permit Condition of P-44-02

The PM_{10} emissions from the emergency engine of P-44-02 shall not exceed 0.4 lb/day, 3 lb/1st calendar quarter, 3 lb/2nd calendar quarter, 3 lb/3rd calendar quarter, 3 lb/4th calendar quarter, and negligible tons/year. [District Rules 2.11, 2.12, 2.16, and 3.4/C-02-78]

Subsuming Demonstration for P-45-02(a1): As previously discussed for Requirement #1 of Rule 2.11, the unit's PM_{10} emission limit (based on Rule 3.4, Section 402.9) is more stringent than the 0.3 gr/DSCF requirement of Rule 2.11 and this rule. Accordingly, the PM_{10} requirements of Subsection (b) have been subsumed by the requirements of Rule 3.4.

Subsuming Permit Condition of P-45-02(a1)

The PM_{10} emissions from the two combustion turbines of P-45-02(a1) shall not exceed 79.5 lb/day, 5,916 lb/1st calendar quarter, 5,916 lb/2nd calendar quarter, 5,916 lb/3rd calendar quarter, 5,916 lb/4th calendar quarter, and 11.83 tons/year. [District Rules 2.11, 2.12, 2.16, and 3.4/C-06-66]

RULE 2.16 Fuel Burning Heat or Power Generators

Rule Description

This rule specifies the allowable SO_2, nitrogen dioxide (NO_2), and combustion PM limits for non-mobile, fuel burning, heat or power generating units. For the purposes of this evaluation, the nitrogen oxide (NO_X) emissions are considered to be 100% NO_2.

Compliance Status

The rule applies to the emergency engine of P-44-02 and the two combustion turbines of P-45-02(a1). The version of the rule used in this evaluation is the rule adopted on October 1, 1971, and is part of the California SIP. The source is currently in compliance with the requirements of the rule.

Rule Requirement #1 - SO_X Emission Limit

The pollutant specific emission limit contained in Subsection (a)(1) reads:

"200 pounds per hour of sulfur compounds, calculated as SO_2;"

Subsuming Demonstration for P-44-02: As previously discussed for Rule Requirement #1 of Rule 2.12, the emergency engine of P-44-02 is also subject to a federally applicable SO_X emission limit of 0.6 lbs/day (established by Rule 3.4, Section 409.2). The rule requirement of Subsection (a)(1) is subsumed by the more stringent daily emission requirement of Rule 3.4, since the 200 lb/hour SO_X limit of Rule 2.16 is less stringent than the daily emission limit required by Rule 3.4.

Subsuming Permit Condition of P-44-02

The SO_X emissions from the emergency engine of P-44-02 shall not exceed 0.6 lb/day, 5 lb/1st calendar quarter, 5 lb/2nd calendar quarter, 5 lb/3rd calendar quarter, 5 lb/4th calendar quarter, and negligible tons/year. [District Rules 2.12, 2.16, and 3.4/C-02-78]

Subsuming Demonstration for P-45-02(a1): As previously discussed for Requirement #1 of Rule 2.12, the two combustion turbines of P-45-02(a1) are also subject to a federally applicable SO_X emission limit of 33.8 lbs/day (established by Rule 3.4, Section 402.9). The rule requirement of Subsection (a)(1) is subsumed by the more stringent daily emission requirement of Rule 3.4, since the 200 lb/hour SO_X limit of Rule 2.16 is less stringent than the daily emission limit required by Rule 3.4.

Subsuming Permit Condition of P-45-02(a1)

The SO_X emissions from the two combustion turbines of P-45-02(a1) shall not exceed 33.8 lb/day, 2,511 lb/1st calendar quarter, 2,511 lb/2nd calendar quarter, 2,511 lb/3rd calendar quarter, 2,511 lb/4th calendar quarter, and 5.02 tons/year. [District Rules 2.12, 2.16, and 3.4, and 40 CFR Part 60.333(a)/C-06-66]

Rule Requirement #2 - NO_X Emission Limit

The pollutant specific emission limit contained in Subsection (a)(2) reads:

"140 pounds per hour of NO_X, calculated as NO_2;"

Subsuming Demonstration for P-44-02: The emergency engine of P-44-02 is also subject to a federally applicable NO_X emission limit of 20.0 lbs/day (established by

Rule 3.4, Section 409.2). The rule requirement of Subsection (a)(2) is subsumed by the more stringent daily emission requirement of Rule 3.4, since the 140 lb/hour NO_X limit of Rule 2.16 is less stringent than the daily emission limit required by Rule 3.4.

Subsuming Permit Condition of P-44-02

The NO_X emissions from the emergency engine of P-44-02 shall not exceed 20.0 lb/day, 167 lb/1st calendar quarter, 167 lb/2nd calendar quarter, 167 lb/3rd calendar quarter, 167 lb/4th calendar quarter, and 0.08 tons/year. [District Rules 2.16 and 3.4/C-02-78]

Subsuming Demonstration for P-45-02(a1): The two combustion turbines of P-45-02(a1) are also subject to a federally applicable NO_X emission limit of 123.2 lbs/day (established by Rule 3.4, Section 402.9). The rule requirement of Subsection (a)(2) is subsumed by the more stringent daily emission requirement of Rule 3.4, since the 140 lb/hour NO_X limit of Rule 2.16 is less stringent than the daily emission limit required by Rule 3.4. For reference, the Rule 3.4 requirement is also more stringent than, and therefore subsumes, the requirements of 40 CFR Part 60.332(b) (see Rule Requirement #2 for 40 CFR Part 60 - Subpart GG).

Related Requirements from other Regulations:
40 CFR Part 60.332(b) requires:

> *"No owner or operator… shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of (0.010% NO_X by volume @ 15% O_2)."*

Subsuming Permit Condition of P-45-02(a1)

The NO_X emissions from the two combustion turbines of P-45-02(a1) shall not exceed 123.2 lb/day, 7,332 lb/1st calendar quarter, 7,332 lb/2nd calendar quarter, 7,332 lb/3rd calendar quarter, 7,332 lb/4th calendar quarter, and 14.66 tons/year. [District Rules 2.16 and 3.4, 40 CFR Part 60.332(b)/C-06-66]

Rule Requirement #3 - PM Emission Limit

The pollutant specific emission limit contained in Subsection (a)(3) reads:

> *"40 pounds per hour of combustion particulate derived from the fuel."*

Subsuming Demonstration for P-44-02: The emergency engine of P-44-02 is also subject to a federally applicable PM_{10} emission limit of 0.4 lbs/day (established by Rule 3.4, Section 409.2). The rule requirement of Subsection (a)(3) is subsumed by the more stringent daily emission requirement of Rule 3.4, since the 40 lb/hour PM limit of Rule 2.16 is less stringent than the daily emission limit required by Rule 3.4.

Subsuming Permit Condition of P-44-02

The PM_{10} emissions from the emergency engine of P-44-02 shall not exceed 0.4 lb/day, 3 lb/1st calendar quarter, 3 lb/2nd calendar quarter, 3 lb/3rd calendar quarter, 3 lb/4th calendar quarter, and negligible tons/year. [District Rules 2.11, 2.12, 2.16, and 3.4/C-02-78]

Subsuming Demonstration for P-45-02(a1): The two combustion turbines of P-45-02(a1) are also subject to a federally applicable PM_{10} emission limit of 79.5 lbs/day (established by Rule 3.4, Section 402.9). As shown below the units' hourly emission limit is more stringent than, and therefore subsumes, the 40 lb/hour PM limit of Rule 2.16, Subsection (a)(3). Using the units' maximum daily operating schedule of 24 hours/day, the units' PM emission concentration is calculated as follows:

= (79.5 lbs/day) * (1 day/24 hours) = 3.3 lbs of PM/hour

Subsuming Permit Condition of P-45-02(a1)

The PM_{10} emissions from the two combustion turbines of P-45-02(a1) shall not exceed 79.5 lb/day, 5,916 lb/1st calendar quarter, 5,916 lb/2nd calendar quarter, 5,916 lb/3rd calendar quarter, 5,916 lb/4th calendar quarter, and 11.83 tons/year. [District Rules 2.11, 2.12, 2.16, and 3.4/C-06-66]

RULE 2.17 Circumvention

Rule Description

This rule prevents sources from concealing emissions to the atmosphere.

Compliance Status

The rule is applicable to all emission units at the facility. The version of the rule used in this evaluation is the rule adopted on October 1, 1971, and is part of the California SIP. The source is currently in compliance with the requirements of the rule.

Rule Requirement #1 (Permit Condition) - Concealed Emissions

The Permit Holder shall not build, erect, install or use any article, machine, equipment, or other contrivance, the use of which, without resulting in a reduction in the total release of air contaminants to the atmosphere, reduces or conceals an emission which would otherwise constitute a violation of Division 26, Part 3 and Part 4 of the Health and Safety Code of the State of California or District Rules or Regulations. [District Rule 2.17]

RULE 2.19 Particulate Matter Process Emission Rate

Rule Description

This rule limits the pound per hour PM emission rate of any emissions unit based on it's material processing rate.

Compliance Status

The rule does not apply to either the emergency engine of P-44-02 or the two combustion turbines of P-45-02(a1). The version of the rule used in this evaluation is the rule adopted on October 1, 1971, and is part of the California SIP. District Rule 1.1, Section 229 (previously Rule 1.2.y.), defines "process weight per hour" as "the total weight of all materials introduced into any specific process which process may cause any discharge into the atmosphere. Solid fuels charged will be considered as part of the process weight, but liquid and gaseous fuels and combustion air will not." Therefore, the compliance of PM emission produced directly from the combustion of gaseous and liquid fuels (i.e. natural gas, propane, ammonia, or diesel fuel) are exempt from the provisions of this rule.

Permit Condition

No permit condition is required.

RULE 2.32 Stationary Internal Combustion Engines

Rule Description

This rule limits the CO and NO_X emissions from stationary IC engines.

Compliance Status

The rule applies to the emergency engine operating of P-44-02. The version of the rule used in this evaluation is the rule adopted on November 10, 2001, and is part of the California SIP.

Rule Requirement #1 - Exemption Applicability

Sections 110.2 and 110.3 of this rule establish the criteria for exempting engines from the requirements of the rule. The sections read:

"110.2 Engines operated less than 200 hours per calendar year; or
110.3 Emergency standby engines operated either during an emergency or maintenance operation. Maintenance operation is limited to 50 hours per calendar year,"

The emergency engine is exempt from the emission limits and the testing requirements of the rule, except for the recordkeeping requirements of Section 503, since it is required to operate less than the exemption limits above (see Rule 3.4).

Rule Requirement #2 - Exemption Records

Section 503 of the rule establishes the record requirements for all exempt engines. The section reads:

> *"An owner or operator claiming an exemption under Sections 110.2 or 110.3 of this Rule shall maintain a log of operating hours for each engine. The log of operating hours shall be retained for two years and be made available to the Air Pollution Control Officer upon request."*

Subsuming Demonstration: The emergency engine of P-44-02 is also subject to the record retention requirements of Rule 3.4. Accordingly, the two (2) year record retention provisions of Rule 2.32 can be subsumed by the more stringent five (5) year retention provisions of Rule 3.4.

Related Requirements from other Regulations:

Rule 3.4, Section 501 requires:

> *"The following records shall be maintained for five years and provided to the Air Pollution Control Officer upon request:*

Rule 3.4, Section 501.1 requires:

> *"Emergency Equipment: Records of operation for maintenance purposes, for actual interruptions of power."*

Subsuming Permit Condition

The Permit Holder shall maintain a log of the operation hours for the IC engine identifying the type of usage (either maintenance or emergency), the duration and date of each usage. The log shall be retained for a period of five (5) years and be made available to District personnel upon request. [District Rules 2.32, §503.1 & District Rule 3.4, §501/C-02-78]

RULE 2.34 Stationary Gas Turbines

Rule Description

The rule limits the emissions of NO_x from stationary gas turbines in conformance with Best Available Retrofit Control Technology (BARCT) determinations approved by the California Air Resources Board (CARB) to meet the requirements of the California Clean Air Act. The rule applies to all turbines operating within the District with ratings at or above 0.3 megawatts (MW).

Compliance Status

The rule applies to the combustion turbines of P-45-02(a1). The emissions unit will be evaluated as having a maximum rating of 49.5 MW, a maximum operational schedule of 7,140 hours per year, and a SCR control system. The version of the rule used in this evaluation is the rule that was adopted on July 13, 1994, and is part of the California SIP. The source is currently in compliance with the rule.

Rule Requirement #1 - Applicable NO_X Limit

Section 301 of the rule places a NO_X emission limitation on a turbine unit that is based on the unit's continuous rating, yearly operational schedule, and control technology. It requires that a turbine owner or operator not operate the turbine under load conditions, excluding the thermal stabilization period, which results in the measured NO_X emissions concentration (averaged over 15-minutes) exceeding the compliance limit listed below in Table 3:

Table 3: NO_X Emission Standards

Unit Size Megawatt Rating (MW)	Compliance limit NO_X, ppm @ 15% O_2	
	Gas[A]	Oil[B]
0.3 to less than 2.9 MW and Units Greater than or Equal to 4 MW that Operate less than 877 hour/year	42	65
2.9 to Less Than 10 MW	25 x EFF/25	65
10.0 MW and Over with SCR	9 x EFF/25	25 x EFF/25
10.0 MW and Over Without SCR	15 x EFF/25	42 x EFF/25

A. Gas includes natural, digester, and landfill gases.
B. Oil includes kerosine, jet, and distillate. The sulfur content of the oil shall be less than 0.05%.

Per Section 301.1, Efficiency (EFF) is the higher of the following:

EFF = (3412 * 100%) * (1/AHR)

Where: AHR = Actual Heat Rate at high heat value (HHV) of Fuel (BTU/kW-hr), which is the demonstrated percent efficiency of the gas turbine only as calculated without consideration of any downstream energy recovery from the actual heat rate, (BTU/KW-hr) or 1.34 (BTU/HP-hr); corrected to the HHV of the fuel and ISO conditions, as measured at peak load for that facility; or

Per Section 301.2, EFF is the higher of the following:

EFF = (MRE * LHV) * (1/HHV)

Where: MRE = Manufacturer's Rated Efficiency with Air Pollution Equipment at lower heating value (LHV), which is the manufacturer's continuous rated percent efficiency of the gas turbine with air pollution equipment after correction from LHV to HHV of the fuel.

As follows, the turbine higher efficiency can be calculated using the equation of Section 301.1, and the unit's reported AHR (10,190 BTU/kW-hr):

EFF = (3412 x 100%) * (1/10,190) = 33.5 %

Since the natural gas fired turbines are rated above 10 MW and equipped with a SCR control system, the appropriate NO_x limit equation from the table is:

NO_x Limit = (9 * EFF) *(1/25)

Using the calculated EFF value of 33.5%, the appropriate NO_x limit for this unit is:

NO_x Limit = (9 * 33.5%)* (1/25)
= 12 ppm corrected to 15% oxygen (O_2), averaged over 15-minutes

This limit will not apply during periods of thermal stabilization of the heat recovery unit and during periods when the unit is not under load. Since the rule does not explicitly exempt turbines from this NO_x limit during shutdown periods, the 12 ppm NO_x limit also applies during the shutdown periods when the turbines are still supplying power to the utility grid.

Permit Condition

The emission concentration when operating under load conditions (except during periods of thermal stabilization) shall not exceed the following:

a. NO_x (as NO_2) - 12 ppmvd, corrected to 15% O_2 (15-minute average). [District Rule 2.34, §301/C-06-66]

Rule Requirement #2 - CEMS Installation and Maintenance

Section 501.1 of the rule establishes installation, maintenance, and operational requirements for the facility's CEMS. The section requires:

"[the Permit Holder shall] install, operate and maintain in calibration equipment, as approved by the Air Pollution Control Officer (APCO), that continuously measures and records the following:

a. Control system operating parameters;

b. Elapsed time of operation; and

c. For units of 10 MW or greater that operated more than 4,000 hours per year over the last three years prior to July 13, 1994, the exhaust gas NO_x concentrations corrected to ISO conditions at 15% O_2 on a dry

basis. The NO_x monitoring system shall meet EPA requirements as specified in 40 CFR Part 60 - Appendix B, Specification 2, or other systems that are acceptable to the EPA."

Streamlining Demonstration: The source is considered an acid rain unit that is also subject to the provisions of 40 CFR Parts 60, 72, 73, and 75. The overlapping CEMS requirements of Rule 2.34, Part 60, and Part 75 can be streamlined into a single condition, since the acid rain requirements are not subsumed.

Related Requirements from other Regulations:
Part 60.13(a) requires:

"All continuous monitoring systems required under applicable subparts shall be subject to the provisions of this section upon promulgation of performance specifications for continuous monitoring systems under Appendix B to this part, and, if the continuous monitoring system is used to demonstrate compliance with the emission limits on a continuous basis, Appendix F to this part, unless otherwise specified in an applicable subpart or the Administrator. Appendix F is applicable December 4, 1987."

Part 75.1(b)(1) reads:

"Specifications for the installation and performance of continuous emission monitoring systems, certification tests and procedures, and quality assurance tests and procedures are included in Appendices A and B to (40 CFR Part 75)."

Streamlined Permit Condition

The Permit Holder shall install and maintain a CEMS for CO, NO_x, and O_2 in the exhaust gas stack. The CEMS shall comply with the requirements of 40 CFR Part 60 - Appendices B and F, and 40 CFR Part 75 - Appendices A and B, and shall be capable of monitoring concentrations and mass emissions during normal operating conditions and during start-up and shutdown periods. [District Rule 2.34, §501.1, 40 CFR Part 60.13(a) and Part 75.1(b)/C-06-66]

Rule Requirement #3 - Record Retention

Section 502.1 of the rule establishes the record retention requirements for all affected units. The section reads:

"All records shall be available for inspection at anytime for a period of two (2) years."

Subsuming Demonstration: The major source is also subject to the record retention requirements of Rule 3.8 (Federal Operating Permits). Accordingly, the two (2) year record retention provisions of Rule 2.34 can be subsumed by the more stringent five (5) year retention provisions of Rule 3.8.

Related Requirements from other Regulations:
Rule 3.8, Section 302.6(b) reads:

"Retention of records of all required monitoring data and support information for a period of at least five (5) years from the date of sample collection, measurement, report, or application."

Subsuming Permit Condition

All records required to be maintained by P-45-02(a1) shall be retained for a period of five (5) years and shall be made readily available for District inspection upon request. [District Rule 2.34, §502.1 and District Rule 3.8, §302.6(b)/C-06-66]

Rule Requirement #4 - Recordkeeping

Sections 502.2 through 502.6 of the rule establishes the recordkeeping requirements for all affected units. The sections read:

502.2 *"Submit to the APCO information demonstrating that the system has data gathering and retrieval capability."*

502.3 *"Submit to the APCO, prior to issuance of a PTO, information correlating the control system operating parameters to the associated NO_x output. This information may be used by the APCO to determine compliance when there is no CEMS for NO_x available or when the CEMS is not operating properly."*

502.4 *"Provide source test information annually regarding the exhaust gas NO_x concentration at ISO conditions corrected to 15% O2 on a dry basis, and the demonstrated percent efficiency (EFF) of the turbine unit."*

502.5 *"Maintain a gas turbine operating log that includes, on a daily basis, the actual Pacific Standard Time start-up and stop time, total hours of operation, type and quantity of fuel used (liquid/gas). This information shall be available for inspection at any time from the date of entry."*

502.6 *"Maintain a gas turbine operating log for units exempt under Section 111 that includes, on a daily basis, the actual Pacific Standard Time start-up and stop time, total hours of operation, and cumulative hours of operation to date for the calendar year. This information shall be available for inspection at any time for two years from the date of entry and submitted to the APCO at the end of each calendar year in a manner and form approved by the APCO."*

Streamlining Demonstration: When ATC C-06-66 was issued, the District used Rule 3.4 to streamline the various recordkeeping requirements of Rule 2.34 with additional requirements needed in order for the source to demonstrate compliance with it's emission and process limits.

Streamlined Permit Condition

The Permit Holder shall maintain the following records:

a. The hourly, average three-hour (rolling average), daily, quarterly, and annual quantity of fuel used and corresponding heat input rates;

b. The daily, quarterly, and annual hours of operation;

c. The date, the time, the duration, and the type of any start-up and thermal stabilization, malfunction, or shutdown, along with the resulting mass emissions during such periods;
d. The emission measurements from all source testing, (Relative Accuracy Test Audits (RATAs), and fuel analyses;
e. The hourly records of CO and NO_X emission concentrations;
f. The hourly ammonia injection rate;
g. The three-hour (rolling average) records of CO and NO_X emission concentrations;
h. The daily, quarterly, and annual records of the measured cumulative CO and NO_X mass emissions;
i. The daily, quarterly, and annual records of the calculated (using the measured heat input per period and the emission concentration from the previous source test) cumulative VOC, SO_X, PM_{10}, and NH_3 mass emissions; and
j. For the CEMS, performance testing, evaluations, calibrations, checks, maintenance, adjustments, and any period of non-operation of any CEM. [District Rule 2.34, §502 and District Rule 3.4/C-06-66]

Rule Requirement #5 - NO_X Emission Test Method

Section 503.1 of the rule requires that the NO_X emission testing be conducted using a specific EPA reference method. The section reads:

"NO_X emissions shall be determined in accordance with EPA Method 20."

Streamlining Demonstration: When ATC C-06-66 was issued, the District imposed source test method requirements for NO_X as well as other pollutants using Rule 3.4. The following condition streamlines the test method requirements of Rule 2.34 and Rule 3.4 into a single condition.

Streamlined Permit Condition

The Permit Holder shall perform the following tests (or alternative test methods, if approved in advance by the District) to measure the required pollutant emission concentrations during any emission testing event:
a. VOC - EPA Method 18 or 25, or CARB Method 100;
b. CO - EPA Method 10, or CARB Method 100;
c. NO_X (as NO_2) - EPA Method 20, or CARB Method 100;
d. Stack gas oxygen - EPA Method 20, or CARB Method 100;
e. Flow rate - EPA Method 19, or CARB Methods 1-4; and
f. NH_3 - Bay Area Air Quality Management District (BAAQMD) Method ST-1B. [District Rule 2.34, §503.1 & District Rule 3.4/C-06-66]

RULE 3.1 General Permit Requirements

Rule Description

The purpose of this rule is to provide an orderly procedure for the review of new sources of air pollution and of the modification and operation of existing sources through the issuance of permits.

Compliance Status

The source is currently in compliance with the rule. The version of the rule used in this evaluation is the rule adopted on February 23, 1994, and is part of the California SIP. For reference, Page 67068 of the Federal Register, Vol. 69, No. 220 documents that the SIP approved version of Rule 3.1 was "deleted without replacement Rule 3.1, paragraphs 403 and 406." No part of the proposed Title V permit has references to either Section 403 (dealing with Denial of Applications) or Section 406 (dealing with Appeals).

Rule Requirement #1 (Facility Wide Permit Condition) - Authority to Construct

No person shall build, erect, alter, or replace any facility, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants, without first obtaining an authorization to construct from the APCO as specified in Section 401 of District Rule 3.1. [District Rule 3.1, §301.1]

Rule Requirements #2 & 3 (Facility Wide Permit Condition) - Permit to Operate

No person shall operate any facility, article, machine, equipment, or other contrivance, for which an authorization to construct is required by District Rules and Regulations without first obtaining a written permit from the APCO. [District Rule 3.1, §302.1]

No person shall operate any facility, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate or reduce or control the issuance of air contaminants, without obtaining a permit from the APCO or the Hearing Board. [District Rule 3.1, §302.2]

Rule Requirement #4 (Facility Wide Permit Condition) - Transfer of PTOs

The PTOs shall not be transferable, by operation of law or otherwise, from one location to another or from one piece of equipment to another. It shall be the transferee's responsibility to inform the District on assumption of ownership or operating control of any item under a PTO from the District and for which a PTO will be required. For any such transfer as hereinabove described, said transferee shall submit an application for authorization in accordance with applicable District Rules. [District Rule 3.1, §304]

Rule Requirement #5 (Facility Wide Permit Condition) - Renewal of PTOs

All PTOs shall be renewable annually on the individual permit's anniversary date, commencing one year after the date of issuance. The Permit Holder shall pay a fee for the annual permit renewal. If the annual renewal fee is not paid by the specified due date, the District shall assess a penalty of not more than 50% of the fee due. Non-payment of renewal fees is grounds for permit cancellation. [District Rule 3.1, §305 and District Rule 4.1, §303 & 401]

Rule Requirement #6 (Facility Wide Permit Condition) - Conditional Approval of PTOs

Commencing work or operation under any PTOs shall be deemed acceptance of all of the conditions so specified. [District Rule 3.1, §402]

Rule Requirement #7 (Facility Wide Permit Condition) - PTO Information

The Permit Holder shall submit an annual throughput/production report at the end of each calendar year for each PTO. These reports are due no later than March 31 for the previous year. This report must include actual operating hours and actual amounts of materials processed (for materials that have process limits listed on the PTO). Each type of material and each type of process must be listed separately. [District Rule 3.1, §405.1]

Rule Requirement #8 (Facility Wide Permit Condition) - Breakdown, Malfunction, or Upset Notification

The owner or operator of any facility, article, machine, equipment, or other contrivance for which a permit to operate is in effect shall notify the District office whenever a breakdown, malfunction, or operational upset condition exists which would tend to increase emissions of air pollutants or whenever any operating condition contrary to any provision of the permit to operate exists. Such notice shall be given to the District no later than four hours after occurrence during regular workday hours or no later than two hours of the District workday following an occurrence not during regular District workday hours. The notice shall provide the District information as to causes and corrective action being taken, with a schedule for return to required operating conditions. [District Rule 3.1, §405.3]

Rule Requirement #9 (Facility Wide Permit Condition) - Posting of PTOs

The Permit Holder shall firmly affix all PTOs, an approved facsimile, or other approved identification bearing the permit number upon the facility, article, machine, equipment, or other contrivance in such a manner as to be clearly visible and accessible. In the event that the facility, article, machine, equipment, or other contrivance is so constructed or operated that the permit to operate cannot be so placed, the permit to operate shall be mounted so as to be clearly visible in an accessible place within twenty (25) feet of the facility, article, machine, equipment, or other contrivance, or

maintained readily available at all times on the operating premises. [District Rule 3.1, §408]

RULE 3.4 New Source Review

Rule Description

This rule applies to all new stationary sources and emissions units and all modifications to existing stationary sources and emissions units which are subject to District Rule 3.1 and which, after construction or modification, emit or may emit any affected pollutants. The purpose of this rule is to provide for the review of new and modified stationary air pollution sources and to provide mechanisms, including emission offsets, by which authorities to construct such sources may be granted without interfering with the attainment or maintenance of ambient air quality standards.

Compliance Status

The rule is applicable to all of the emission units at the facility. The source is currently in compliance with the rule. The version of the rule used in this evaluation is the rule adopted on December 11, 1996, and is part of the California SIP. These New Source Review requirements are contained in the most recent ATCs issued to the source and implemented into PTOs.

Rule Requirement #1 (Facility Wide Permit Condition) - Modification of PTOs

Modifications to this permit, as defined by District Rules and Regulations, requires prior District approval. A modification is defined as any physical change, change in method of operation, addition to or any change in hours of operation, or change in production rate, which: would necessitate a change in permit conditions; or is not specifically limited by a permit condition; or results in an increase in emissions not subject to an emissions limitation. [District Rule 3.4, §223]

Emission Unit Specific Permit Conditions

Emission Limits of P-44-02

The VOC emissions from the emergency engine of P-44-02 shall not exceed 0.5 lb/day, 4 lb/1st calendar quarter, 4 lb/2nd calendar quarter, 4 lb/3rd calendar quarter, 4 lb/4th calendar quarter, and negligible tons/year. [District Rule 3.4/C-02-78]

The CO emissions from the emergency engine of P-44-02 shall not exceed 2.6 lb/day, 22 lb/1st calendar quarter, 22 lb/2nd calendar quarter, 22 lb/3rd calendar quarter, 22 lb/4th calendar quarter, and 0.01 tons/year. [District Rule 3.4/C-02-78]

The NO_X emissions from the emergency engine of P-44-02 shall not exceed 20.0 lb/day, 167 lb/1st calendar quarter, 167 lb/2nd calendar quarter, 167 lb/3rd calendar quarter, 167 lb/4th calendar quarter, and 0.08 tons/year. [District Rules 2.16 and 3.4/C-02-78] [1]

The SO_X emissions from the emergency engine of P-44-02 shall not exceed 0.6 lb/day, 5 lb/1st calendar quarter, 5 lb/2nd calendar quarter, 5 lb/3rd calendar quarter, 5 lb/4th calendar quarter, and negligible tons/year. [District Rules 2.12, 2.16, and 3.4/C-02-78] [2]

The PM_{10} emissions from the emergency engine of P-44-02 shall not exceed 0.4 lb/day, 3 lb/1st calendar quarter, 3 lb/2nd calendar quarter, 3 lb/3rd calendar quarter, 3 lb/4th calendar quarter, and negligible tons/year. [District Rules 2.11, 2.12, 2.16, and 3.4/C-02-78] [3]

Emission Limits of P-45-02(a1)

The VOC emissions from the two combustion turbines of P-45-02(a1) shall not exceed 34.3 lb/day, 2,550 lb/1st calendar quarter, 2,550 lb/2nd calendar quarter, 2,550 lb/3rd calendar quarter, 2,550 lb/4th calendar quarter, and 5.10 tons/year. [District Rule 3.4/C-06-66]

The CO emissions from the two combustion turbines of P-45-02(a1) shall not exceed 240.0 lb/day, 13,389 lb/1st calendar quarter, 13,389 lb/2nd calendar quarter, 13,389 lb/3rd calendar quarter, 13,389 lb/4th calendar quarter, and 26.78 tons/year. [District Rule 3.4/C-06-66]

The NO_X emissions from the two combustion turbines of P-45-02(a1) shall not exceed 123.2 lb/day, 7,332 lb/1st calendar quarter, 7,332 lb/2nd calendar quarter, 7,332 lb/3rd calendar quarter, 7,332 lb/4th calendar quarter, and 14.66 tons/year. [District Rules 2.16 and 3.4, 40 CFR Part 60.332(b)/C-06-66] [4]

The SO_X emissions from the two combustion turbines of P-45-02(a1) shall not exceed 33.8 lb/day, 2,511 lb/1st calendar quarter, 2,511 lb/2nd calendar quarter, 2,511 lb/3rd

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[1] The Rule 3.4 condition subsumes the requirements of Rule 2.16 (see Rule Requirement #2 of Rule 2.16).

[2] The Rule 3.4 condition subsumes the requirements of Rules 2.12 and 2.16 (see the individual rule discussions).

[3] The Rule 3.4 condition subsumes the requirements of Rules 2.11, 2.12, and 2.16 (see the individual rule discussions).

[4] The Rule 3.4 condition subsumes the requirements of Rule 2.16 and 40 CFR Part 60.332(b) (see the individual rule discussions).

calendar quarter, 2,511 lb/4th calendar quarter, and 5.02 tons/year. [District Rules 2.12, 2.16, and 3.4, and 40 CFR Part 60.333(a)/C-06-66] [5]

The PM_{10} emissions from the two combustion turbines of P-45-02(a1) shall not exceed 79.5 lb/day, 5,916 lb/1st calendar quarter, 5,916 lb/2nd calendar quarter, 5,916 lb/3rd calendar quarter, 5,916 lb/4th calendar quarter, and 11.83 tons/year. [District Rules 2.11, 2.12, 2.16, and 3.4/C-06-66] [6]

The emission concentrations (except during periods of turbine start-up and thermal stabilization, and turbine shutdown) shall not exceed the following:

a. VOC (as methane) - 2.0 parts per million by volume dry (ppmvd), corrected to 15% O_2, (3-hour rolling average);
b. CO - 50.0 ppmvd, corrected to 15% O_2, (3-hour rolling average);
c. NO_X (as NO_2) - 3.0 ppmvd, corrected to 15% O_2, (3-hour rolling average);
d. NH_3 - 10.0 ppmvd, corrected to 15% O_2;
e. SO_X - 0.0028 lb/MMBtu; and
f. PM_{10} - 0.0066 lb/MMBtu. [District Rule 3.4, §409.2(a)/C-06-66]

The mass emissions from the gas turbines (including periods of start-up, thermal stabilization, and shutdown) shall not exceed the daily, quarterly, or annual values listed in the Permitted Emission Limits table of P-45-02(a1). [District Rule 3.4, §409.2(b)/C-06-66]

Process Limits of P-44-02

The maximum diesel fuel consumption rate of the IC engine of P-44-02 shall not exceed 91 gallons/day, 760 gallons/1st calendar quarter, 760 gallons/2nd calendar quarter, 760 gallons/3rd calendar quarter, 760 gallons/4th calendar quarter, and 760 gallons/year. [District Rule 3.4/C-02-78]

Process Limits of P-45-02(a1)

The maximum natural gas fuel consumption rate of the turbines of P-45-02(a1) shall not exceed 11.815 million cubic feet/day, 878.738 million cubic feet/1st calendar quarter, 878.738 million cubic feet/2nd calendar quarter, 878.738 million cubic feet/3rd calendar quarter, 878.738 million cubic feet/4th calendar quarter, and 3,514.951 million cubic feet/year. [District Rule 3.4/C-06-66]

[5] The Rule 3.4 condition subsumes the requirements of Rules 2.12, 2.16, and 40 CFR Part 60.333(a) (see the individual rule discussions).

[6] The Rule 3.4 condition subsumes the requirements of Rules 2.11, 2.12, and 2.16 (see the individual rule discussions).

Work Practice and Operational Requirements of P-44-02

The Permit Holder shall not operate the IC engine more than fifty (50) hours per calendar year for maintenance and testing purposes, and such operation shall be scheduled in cooperation with the District so as to limit air quality impact. [District Rule 3.4, §110.1/C-02-78]

The Permit Holder shall not operate the IC engine more than two-hundred (200) hours per calendar year. [District Rule 3.4, §110.2/C-02-78]

The Permit Holder's operation of the IC engine for reasons other than maintenance and testing purposes shall be limited to the emergency pumping of water for fire fighting. [District Rule 3.4, §110.4] [7]

Work Practice and Operational Requirements of P-45-02(a1)

The start-up and thermal stabilization of the gas turbines shall not exceed a time period of two (2) hours per each occurrence. The start-up clock begins with the initial firing of the turbines and continues until the units meet the CO and NO_x ppmvd emission concentration limits. [District Rule 3.4/C-06-66]

The shutdown of the gas turbines shall not exceed a time period of thirty (30) minutes per each occurrence. The shut-down clock begins with the initiation of the turbine shutdown sequence and ends with the cessation of firing of the gas turbines. [District Rule 3.4/C-06-66]

The turbines shall be fired only on natural gas with a total sulfur content not exceeding 1 grain/100 standard cubic foot of gas. [District Rule 3.4, §409.2(a) and 40 CFR Part 60.333(b)/C-06-66]

The Permit Holder shall install and maintain a District approved fuel flow meter in order to record the fuel heat input rate to the turbines. [District Rule 3.4/C-06-66]

The Permit Holder shall install and maintain an ammonia (NH_3) flow meter and injection pressure indicator for the ammonia injection system. The equipment shall be accurate to plus or minus five percent (+/- 5%) and shall be calibrated once every twelve (12) months. [District Rule 3.4/C-06-66]

The Permit Holder shall install and maintain such facilities as are necessary for sampling and testing purposes. The number, size, and location of sampling ports shall be in accordance with California Air Resources Board Test Method 1 or U.S. EPA Test Methods. The location and access to the sampling platform shall be in accordance

[7] The requirements of Section 110.4 of Rule 3.4 were erroneously omitted from ATC C-02-78 and PTO P-44-02. As such, the Rule 3.4 requirement have now been included in the renewed Title V operating permit.

with the General Industry Safety Orders of the State of California. [District Rule 3.4/C-06-66]

Monitoring and Testing Requirements of P-45-02(a1)

The NH_3 emission concentration (slip) shall be verified by the continuous recording of the ammonia injection rate to the SCR control system. The equipment shall operate within the NH_3 injection range established during the most recent source test until re-established through another valid source test. [District Rule 3.4/C-06-66]

The Permit Holder shall analyze the fuel's higher heating value (wet basis), and the total sulfur and nitrogen content of the fuel gas on a quarterly basis. [District Rule 3.4 and 40 CFR Part 60.334(h)/C-06-66] [8]

The Permit Holder shall perform a source test at least once every twelve (12) months to demonstrate compliance with the following items:

a. VOC concentration (ppmvd @ 15% O_2);
b. CO concentration (ppmvd @ 15% O_2);
c. NO_X concentration (ppmvd @ 15% O_2);
d. NH_3 concentration (ppmvd @ 15% O_2); and
e. Stack gas flow rate (SDCFM). [District Rule 3.4/C-06-66]

The Permit Holder shall perform a RATA of the CO, NO_X and O_2 continuous emission monitoring system at least once every four (4) successive quality assurance (QA) operating quarters (as defined by 40 CFR Part 72.2, at least 168 unit operating hours) or at least once every twenty-four (24) consecutive calendar months, whichever is more stringent. The RATA shall be performed in accordance with 40 CFR Part 75 - Appendix B (Quality Assurance and Quality Control Procedures). [District Rule 3.4, 40 CFR Part 60 - Appendix F, Section 5.1.1 and 40 CFR Part 75 - Appendix F, Section 2.3.1.1/C-06-66] [9]

Each CEMS must be audited at least once every calendar quarter that a RATA is not performed, either with a cylinder gas audit (performed in accordance with 40 CFR Part 60 – Appendix F) or with a linearity test (performed in accordance with 40 CFR Part 75 – Appendix B). Successive quarterly audits shall occur no closer than two (2) months. In any calendar quarter which qualifies as QA operating quarter, the audit shall be a linearity test. In every other calendar quarter, the audit shall be a CGA.

[8] This condition streamlines the requirements of Rule 3.4 and 40 CFR Part 60.334(h) (see Rule Requirement #5 for 40 CFR Part 60.334(h)).

[9] The streamlined condition combines the requirements of Rule 3.4, 40 CFR Part 72, and 40 CFR Part 75 - Appendix B, while it subsumes the requirements of 40 CFR Part 60 - Appendix F (see individual rule discussion for details).

[District Rule 3.4, 40 CFR Part 60 - Appendix F, Section 5.1.2, and 40 CFR Part 75 - Appendix B, Section 2.2.1] [10]

The Permit Holder shall perform the following tests (or alternative test methods, if approved in advance by the District) to measure the required pollutant emission concentrations during any emission testing event:

a. VOC - EPA Method 18 or 25, or CARB Method 100;
b. CO - EPA Method 10, or CARB Method 100;
c. NO_X (as NO_2) - EPA Method 20, or CARB Method 100;
d. Stack gas oxygen - EPA Method 20, or CARB Method 100;
e. Flow rate - EPA Method 19, or CARB Methods 1-4; and
f. NH_3 - Bay Area Air Quality Management District (BAAQMD) Method ST-1B. [District Rule 2.34, §503.1 & District Rule 3.4/C-06-66] [11]

The District must be notified prior to any emissions testing event (source test or RATA), and a protocol must be submitted for approval thirty (30) days prior to testing. The results of an emissions testing event shall be submitted to the District within sixty (60) days of the test date. The protocol and report shall be mailed to the attention of the Supervising Air Quality Engineer. [District Rule 3.4/C-06-66]

Recordkeeping Requirements of P-44-02

The Permit Holder shall maintain a log of the operation hours for the IC engine identifying the type of usage (either maintenance or emergency), the duration and date of each usage. The log shall be retained for a period of five (5) years and be made available to District personnel upon request. [District Rules 2.32, §503.1 & District Rule 3.4, §501/C-02-78] [12]

Recordkeeping Requirements of P-45-02(a1)

The Permit Holder shall maintain the following records:

a. The hourly, average three-hour (rolling average), daily, quarterly, and annual quantity of fuel used and corresponding heat input rates;
b. The daily, quarterly, and annual hours of operation;
c. The date, the time, the duration, and the type of any start-up and thermal stabilization, malfunction, or shutdown, along with the resulting mass emissions during such periods;

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[10] The streamlined condition combines the requirements of Rule 3.4, 40 CFR Part 60 - Appendix F, and 40 CFR Part 75 - Appendix F (see rule sections for discussion).

[11] This condition streamlines the requirements of Rule 3.4 and Rule 2.34 (see Rule Requirement #4 of Rule 2.34).

[12] The record retention requirements of Rule 2.32 have been subsumed by the requirements of Rule 3.4, Section 501 (see Rule Requirement #2 of Rule 2.32).

d. The emission measurements from all source testing, (Relative Accuracy Test Audits (RATAs), and fuel analyses;
e. The hourly records of CO and NO_X emission concentrations;
f. The hourly ammonia injection rate;
g. The three-hour (rolling average) records of CO and NO_X emission concentrations;
h. The daily, quarterly, and annual records of the measured cumulative CO and NO_X mass emissions;
i. The daily, quarterly, and annual records of the calculated (using the measured heat input per period and the emission concentration from the previous source test) cumulative VOC, SO_X, PM_{10}, and NH_3 mass emissions; and
j. For the CEMS, performance testing, evaluations, calibrations, checks, maintenance, adjustments, and any period of non-operation of any CEM. [District Rule 2.34, §502 and District Rule 3.4/C-06-66] [13]

The Permit Holder shall report to the District any violation of any emission standard, as indicated by the CEMS within ninety-six (96) hours after such occurrence. [District Rule 3.4/C-06-66]

The Permit Holder shall submit to the District a written report for each calendar quarter, within thirty (30) days of the end of the quarter, which includes the following:
a. The time intervals, date, and magnitude of excess emissions;
b. The nature and cause of the excess emission, and corrective actions taken;
c. The time and date of each period during which the CEM was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; and
d. A negative declaration when no excess emissions occurred. [District Rule 3.4/C-06-66]

RULE 3.8 Federal Operating Permits

Rule Description

This Rule implements the requirements of Title V of the Federal Clean Air Act as amended in 1990 (CAA) for permits to operate. Title V provides for the establishment of operating permit programs for sources which emit regulated air pollutants, including attainment and non-attainment pollutants.

Compliance Status

The source submitted a complete Title V renewal application on September 1, 2009. The source is in compliance with the requirements of this rule and the conditions of Title V permit F-05409-1 (effective through October 19, 2010).

[13] This condition streamlines requirements of Rule 3.4 and Rule 2.34 (see Rule Requirement #4 of Rule 2.34).

Rule Requirement #1 (Permit Condition) - Right of Entry

The permit shall require that the source allow the entry of the District, CARB, or U.S. EPA officials for the purpose of inspection and sampling, including:

a. Inspection of the stationary source, including equipment, work practices, operations, and emissions-related activity;
b. Inspection and duplication of records required by the permit to operate; and
c. Source sampling or other monitoring activities. [District Rule 3.8, §302.10]

Rule Requirements #2-7 (Permit Conditions) - Compliance with Permit Conditions

The Permit Holder shall comply with all Title V permit conditions. [District Rule 3.8, §302.11(a)]

The permit does not convey property rights or exclusive privilege of any sort. [District Rule 3.8, §302.11(b)]

Non-compliance with any permit condition is grounds for permit termination, revocation and reissuance, modification, enforcement action, or denial of permit renewal. [District Rule 3.8, §302.11(c)]

The Permit Holder shall not use the "need to halt or reduce a permitted activity in order to maintain compliance" as a defense for non-compliance with any permit condition. [District Rule 3.8, §302.11(d)]

A pending permit action or notification of anticipated non-compliance does not stay any permit condition. [District Rule 3.8, §302.11(e)]

Within a reasonable time period, the Permit Holder shall furnish any information requested by the APCO, in writing, for the purpose of determining:

a. Compliance with the permit; or
b. Whether or not cause exists for a permit or enforcement action. [District Rule 3.8, §302.11(f)]

Rule Requirements #8-9 (Permit Conditions) - Emergency Provisions

Within two (2) weeks of an emergency event, the owner or operator shall submit to the District a properly signed contemporaneous log or other relevant evidence demonstrating that:

a. An emergency occurred;
b. The Permit Holder can identify the cause(s) of the emergency;
c. The facility was being properly operated at the time of the emergency;
d. All steps were taken to minimize the emissions resulting from the emergency; and
e. Within two (2) working days of the emergency event, the Permit Holder provided the District with a description of the emergency and any mitigating or corrective actions taken; and

In any enforcement proceeding, the Permit Holder has the burden of proof for establishing that an emergency occurred. [District Rule 3.8, §302.12]

Rule Requirement #10 (Permit Condition) - Severability

If any provision, clause, sentence, paragraph, section or part of these conditions for any reason is judged to be unconstitutional or invalid, such judgement shall not affect or invalidate the remainder of these conditions. [District Rule 3.8, §302.13]

Rule Requirement #11 (Permit Condition) - Compliance Certification (Annual)

Section 302.14(a) of Rule 3.8 requires:

> *"The responsible official shall submit a compliance certification to the U.S. EPA and the APCO every twelve (12) months unless required more frequently by an applicable requirement. All compliance reports and other documents required to be submitted to the District by the responsible official shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete;"*

Streamlining Demonstration: Per U.S. EPA's guidance, the District as part of this renewal will amend the condition to include explicit reporting and submittal dates. The revised condition requires that the yearly reporting period begin on the Title V permit's initial issuance date, and that the report be submitted within a month of the end of the reporting period.

Streamlined Permit Condition

The Responsible Official shall submit a compliance certification to the U.S. EPA and the APCO every twelve (12) months unless required more frequently by an applicable requirement. The twelve (12) month period will begin on the date that the Title V permit was originally issued, and will be due within thirty (30) days after the end of the reporting period, unless otherwise approved in writing by the District. All compliance reports and other documents required to be submitted to the District by the responsible official shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. [District Rule 3.8, §302.14(a)]

Rule Requirements #12-14 (Permit Conditions) - Compliance Certification (General)

The compliance certification shall identify the basis for each permit term or condition (e.g., specify the emissions limitation, standard, or work practice) and a means of monitoring compliance with the term or condition consistent with Sections 302.5, 302.6, and 302.7 of Rule 3.8. [District Rule 3.8, §302.14(b)]

The compliance certification shall include a statement of the compliance status, whether compliance was continuous or intermittent, and method(s) used to determine

compliance for the current time period and over the entire reporting period. [District Rule 3.8, §302.14(c)]

The compliance certification shall include any additional inspection, monitoring, or entry requirement that may be promulgated pursuant to Sections 114(a) and 504(b) of the Federal Clean Air Act. [District Rule 3.8, §302.14(d)]

Rule Requirement #15 (Permit Condition) - Permit Life

The Title V permit shall expire five (5) years from the date of issuance. Title V permit expiration terminates the stationary source's right to operate unless a timely and complete Title V permit application for renewal has been submitted. [District Rule 3.8, §302.15]

Rule Requirement #16 (Permit Condition) - Payment of Fees

An owner or operator shall pay the appropriate Title V permit fees on schedule. If fees are not paid on schedule, the permit is forfeited. Operation without a permit subjects the source to potential enforcement action by the District and the U.S. EPA pursuant to Section 502(a) of the CAA. [District Rule 3.8, §302.16]

Rule Requirements #17-20 (Permit Conditions) - Acid Rain Units

The SO_2 emissions from the two combustion turbines of P-45-02(a1) shall not exceed the annual emissions allowances (up to one (1) ton per year of SO_2 may be emitted for each emission allowance allotted) that the source lawfully holds for that unit under Title IV of the CAA or the regulations promulgated pursuant to Title IV. [District Rule 3.8, §302.19(a)]

Any increase in the SO_2 emissions for the two combustion turbines of P-45-02(a1) that is authorized by allowances acquired pursuant to Title IV of the CAA shall not require a revision of Appendix A of this operating permit provided such increases do not require permit revision under any other applicable federal requirement. [District Rule 3.8, §302.19(b)]

Although there is no limit on the number of SO_2 emissions allowances held by a source, the Permit Holder shall not use these emissions allowances as a defense for non-compliance with any applicable federal requirement or District requirement, including District Regulation III (Permit System). [District Rule 3.8, §302.19(c)]

The SO_2 allowances for the two combustion turbines of P-45-02(a1) shall be accounted for according to the procedures established in regulations promulgated pursuant to Title IV of the CAA. [District Rule 3.8, §302.19(d)]

Rule Requirement #21 (Permit Condition) - Permit Revision Exemption

No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes, for changes that are provided for in the permit. [District Rule 3.8, §302.22]

Rule Requirements #22-24 (Permit Conditions) - Application Requirements

An owner or operator shall submit a standard District application for renewal of the Title V permit, no earlier than eighteen (18) months and no later than six (6) months before the expiration date of the current permit to operate. [District Rule 3.8, §402.2]

An owner or operator shall submit a standard District application for each emissions unit affected by a proposed permit revision that qualifies as a significant Title V permit modification. The application shall be submitted after obtaining any required preconstruction permits. Upon request by the APCO, the owner or operator shall submit copies of the latest preconstruction permit for each affected emissions unit. The emissions unit(s) shall not commence operation until the APCO approves the permit revision. [District Rule 3.8, §402.3]

An owner or operator shall submit a standard District application for each emissions unit affected by the proposed permit revision that qualifies as a minor permit modification. The application shall be submitted after obtaining any required preconstruction permits. The emissions unit(s) shall not commence operation until the APCO approves the permit revision. In the application, the owner or operator shall include the following:

a. A description of the proposed permit revision, any change in emissions, and additional applicable federal requirements that will apply;
b. Proposed permit terms and conditions; and
c. A certification by a responsible official that the permit revision meets criteria for use of minor permit modification procedures and a request that such procedures be used. [District Rule 3.8, §402.4]

Rule Requirement #25 (Permit Condition) - Permit Reopening for Cause

Circumstances that are cause for reopening and revision of a permit include, but are not limited to, the following:

a. The need to correct a material mistake or inaccurate statement;
b. The need to revise or revoke a permit to operate to assure compliance with applicable federal requirements;
c. The need to incorporate any new, revised, or additional applicable federal requirements, if the remaining authorized life of the permit is three (3) years or greater, no later than eighteen (18) months after the promulgation of such requirement (where less than three (3) years remain in the authorized life of the permit, the APCO shall incorporate the requirements into the permit to operate upon renewal); or

d. Additional requirements promulgated pursuant to Title IV as they become applicable to any acid rain unit governed by the permit. [District Rule 3.8, §413.1]

Rule Requirement #26 (Permit Condition) - Recordkeeping

The Permit Holder shall record maintenance of all monitoring and support information required by any applicable federal requirement, including:
a. Date, place, and time of sampling;
b. Operating conditions at the time of sampling;
c. Date, place, and method of analysis; and
d. Results of the analysis. [District Rule 3.8, §302.6(a)]

Rule Requirement #27 - Recordkeeping (Retention)

Section 302.6(b) of the rule establishes the record retention requirements for all major sources (see Rule Requirement #3 of Rule 2.34 for section language).

Subsuming Demonstration: As previously discussed for Requirement #3 of Rule 2.34, the requirements of Section 502.1 of Rule 2.34 have been subsumed by the requirements of this rule.

Subsuming Permit Condition

All records required to be maintained by P-45-02(a1) shall be retained for a period of five (5) years and shall be made readily available for District inspection upon request. [District Rule 2.34, §502.1 and District Rule 3.8, §302.6(b)/C-06-66]

Rule Requirement #28-31 (Permit Condition) - Reporting Requirements (General)

Any deviation from permit requirements, including that attributable to upset conditions (as defined in the permit), shall be promptly reported to the APCO. For the purpose of this condition prompt means as soon as reasonably possible, but no later than 10 days after detection.[District Rule 3.8, §302.7(a)]

All reports of deviation from permit requirements shall include the probable cause of the deviation and any preventive or corrective action taken. [District Rule 3.8, §302.7(c)]

Each monitoring report shall be accompanied by a written statement from the responsible official that certifies the truth, accuracy, and completeness of the report. [District Rule 3.8, §302.7(e)]

Rule Requirement #29 (Permit Condition) - Reporting Requirements (Semi-Annual)

Section 302.7(b) of Rule 3.8 requires:

"A monitoring report shall be submitted at least every six (6) months and shall identify any deviation from permit requirements, including that previously reported to the APCO pursuant to Section 302.7(a) of Rule 3.8."

Streamlining Demonstration: Per U.S. EPA's guidance, the District as part of this renewal will amend the condition to include explicit reporting and submittal dates. The revised condition requires that the semi-annual reporting period begin on the Title V permit's initial issuance date, and that the report be submitted within a month of the end of the reporting period.

Streamlining Permit Condition

A semi-annual monitoring report shall be submitted at least every six (6) consecutive calendar months and shall identify any deviation from permit requirements, including that previously reported to the APCO pursuant to Section 302.7(a) of Rule 3.8. The six (6) month period will begin on the date that the Title V permit was originally issued, and will be due within thirty (30) days after the end of the reporting period, unless otherwise approved in writing by the District. [District 3.8, §302.7(b)]

RULE 3.23 Acid Deposition Control

Rule Description

The rule incorporates by reference the provisions of Title IV of the Federal Clean Air Act (40 CFR Parts 72 through 78).

Compliance Status

This rule was adopted by the District on August 12, 2009, and will not be made part of the California SIP. However, the rule is federally enforceable since it incorporates by reference the acid rain regulations and delegates the issuance of source's the Title IV permit to the District.

Permit Condition

The Permit Holder shall comply with the Title IV (Acid Deposition Control) requirements contained in Appendix A of the Title V permit. [District Rule 3.23]

40 CFR PART 60 - SUBPART A General Provisions

Rule Description

The regulation applies to any affected facility that is subject to the NSPS regulations listed in the 40 CFR Part 60 - Subpart A. Specifically, since the source is subject to

the emission standards of Subpart GG (Part 60.330) and utilizes a continuous emission monitoring system (CEMS), the source is also subject the provisions of Subpart A.

Compliance Status

The rule applies to the combustion turbines of P-45-02(a1). The units are currently operating in compliance with the monitoring and notification requirements of the subpart (Part 60.13 and Part 60.19, respectively).

Rule Requirement #1 - CEMS Installation and Maintenance

Part 60.13 of the rule establishes installation and maintenance requirements for the CEMS (see Rule Requirement #2 of Rule 2.34 for section language).

Streamlining Demonstration: As previously discussed for Requirement #2 of Rule 2.34, the requirements of Rule 2.34, and 40 CFR Part 60.13 and Part 75.1 have been streamlined into a single condition.

Streamlined Permit Condition

The Permit Holder shall install and maintain a CEMS for CO, NO_X, and O_2 in the exhaust gas stack. The CEMS shall comply with the requirements of 40 CFR Part 60 - Appendices B and F, and 40 CFR Part 75 - Appendices A and B, and shall be capable of monitoring concentrations and mass emissions during normal operating conditions and during start-up and shutdown periods. [District Rule 2.34, §501.1, 40 CFR Part 60.13(a) and Part 75.1(b)/C-06-66]

40 CFR PART 60 - SUBPART D Standards of Performance for Fossil-Fuel Fired Steam Generators

Rule Description

This subpart contains emission guidelines and monitoring requirements for fossil fuel fired steam generators.

Compliance Status

This subpart is applicable to fossil fuel fired steam generators over 250 MMBTU/hour. This subpart is not applicable to any units at the source.

Permit Condition

No permit condition required.

40 CFR PART 60 - SUBPART Da Standards of Performance for Electric Utility Steam Generating Units

Rule Description

This subpart contains emission guidelines and monitoring requirements for electric utility steam generating units.

Compliance Status

This subpart is applicable to electric utility steam generators with ratings over 250 MMBTU/hour. This subpart is not applicable to any units at the source.

Permit Condition

No permit condition required.

40 CFR PART 60 - SUBPART Db Standards of Performance for Industrial, Commercial, Institutional Steam Generating Units

Rule Description

This subpart contains emission guidelines and monitoring requirements for industrial, commercial, and institutional steam generating units.

Compliance Status

This subpart is applicable to industrial, commercial, and institutional steam generators with maximum ratings over 100 MMBTU/hour. This subpart is not applicable to any units at the source.

Permit Condition

No permit condition required.

40 CFR PART 60 - SUBPART Dc Standards of Performance for Small Industrial, Commercial, Institutional Steam Generating Units

Rule Description

This subpart contains emission guidelines and monitoring requirements for small industrial, commercial, and institutional steam generating units.

Compliance Status

This subpart is applicable to industrial, commercial, and institutional steam generators with maximum ratings between 10 MMBTU/hour and 100 MMBTU/hour for which construction, modification, or reconstruction is commenced after June 9, 1989. This subpart is not applicable to any units at the source.

Permit Condition

No permit condition required.

40 CFR PART 60 - SUBPART GG Standards of Performance for Stationary Gas Turbines

Rule Description

The subpart contains emission guidelines for all stationary gas turbines with a heat input at peak load equal to or greater than 10.7 giga joules (J) per hour (or 10 MMBTU/hr), based on the lower heating value of the fuel being fired.

Compliance Status

The subpart applies to the combustion turbines of P-45-02(a1) firing on Public Utility Commission (PUC) grade natural gas. The source is currently in compliance with the rule.

Rule Requirement #1 - Applicability Threshold Calculation

Part 60.330(a) establishes the applicability threshold for Subpart GG as a stationary gas turbine with a heat input (HI) at peak load equal to or greater than 10.7 gigajoules per hour (giga J/hr). Using the turbines' fuel consumption rate at peak load (492,290 SCF/hour), the higher heating value of natural gas (1,020 BTU/SCF), the percent difference between the fuel's higher and lower heating values (90.1%), the units' HI is calculated as follows:

HI = (492,290 SCF/hr) * (1,020 BTU/SCF) * (90.1%) * (1 MMBTU/10^6 BTU) * (1.070 giga J/1 MMBTU) = 422.8 giga J/hr

As such, the two turbines of P-45-02(a1) are subject to the requirements of the Subpart.

Permit Condition

The Permit Holder shall comply with the applicable requirements of 40 CFR Part 60 - Subpart GG (Standards of Performance for Stationary Gas Turbines). [40 CFR Part 60.330/C-06-66]

Rule Requirement #2 - NO_X Emission Limit

Part 60.332(b) requires that turbines with an HI rating greater than 107.2 giga J/hr (based on the fuel's lower heating value) comply with the NO_X standards of Section 60.332(a)(1). Part 60.332(a)(1) uses the following formula to calculate the allowable limit (STD):

$$STD = (0.0075 * 14.4)*(1/ Y) + F$$

Where:
- STD = allowable NO_X emissions (% by volume at 15% O_2 and on a dry basis);
- Y = manufacturer's rated heat rate at manufacturer's rated load (kilo J/W-hr); and
- F = NO_X emission allowance for fuel-bound nitrogen as defined in Section 60.332(a)(3)

The allowed turbine NO_X emission limit can be calculated using the manufacturer's rated heat rate (10,190 BTU/W-hr or 10.75 kilo J/W-hr), and the natural gas fuel-bound allowance (F = 0, as defined in Part 60.332(a)(3)).

$$STD = (0.0075 * 14.4 / 10.75) + 0$$
$$= 0.010\% NO_X \text{ by volume @ } 15\% O_2$$

Subsuming Demonstration: As previously discussed for Requirement #2 of Rule 2.16, the two combustion turbines of P-45-02(a1) are also subject to the federally applicable NO_X emission limits of Rule 3.4, Section 402.9 (123.2 lb/day) and by Rule 2.16, Section (a)(2) (140 lb/hr). As shown below, the Rule 3.4 requirement subsumes the less stringent Part 60.332(b) requirement.

The NO_X emission limit of P-45-02(a1) (based on Rule 3.4) is 123.2 lb/day. Using the maximum daily operating schedule of 24 hours, the maximum turbine fuel consumption rate of 492,290 SCF/hour, the natural gas higher heating value of 1,020 BTU/SCF, and the natural gas F-Factor of 8,710 DSCF/MMBTU, the units' NO_X emission concentration is calculated as follows:

$= (123.2 \text{ lb/day}) * (1 \text{ day}/24 \text{ hr}) * (1 \text{ lb-mole}/46 \text{ lb } NO_2) * (385 \text{ SCF}_{EXHAUST}/\text{lb-mole}) * (1 \text{ MMBtu}/8{,}710 \text{ SCF}_{EXHAUST}) * (10^6 \text{ BTU}/1 \text{ MMBTU}) * (1 \text{ SCF}_{FUEL}/1{,}020 \text{ BTU}) * (1 \text{ hr}/492{,}290 \text{ SCF}_{FUEL}) * 100\ \% = 0.0010\% NO_X$

Subsuming Permit Condition

The NO_X emissions from the two combustion turbines of P-45-02(a1) shall not exceed 123.2 lb/day, 7,332 lb/1st calendar quarter, 7,332 lb/2nd calendar quarter, 7,332 lb/3rd calendar quarter, 7,332 lb/4th calendar quarter, and 14.66 tons/year. [District Rules 2.16 and 3.4, 40 CFR Part 60.332(b)/C-06-66]

Rule Requirement #3 - SO_X Emission Limit

Part 60.333(a) requires that turbines comply with a SO_X emission limit of 0.015% by volume. The section reads:

> *"No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine any gases which contain SO_2 in excess of 0.015% by volume at 15% oxygen and on a dry basis."*

Streamlining Demonstration: The two combustion turbines of P-45-02(a1) are also subject to a federally applicable PM emission limits of Rule 3.4, Section 409.2 (33.8 lb/day) and Rule 2.12 (0.2%). As shown below, the Rule 3.4 requirement subsumes the less stringent of 40 CFR Part 60.333 (a) and Rule 2.12 (as previously discussed for Requirement #1 of Rule 2.12).

The SO_X emission limit of P-45-02(a1) (based on Rule 3.4) is 33.8 lb/day. Using the maximum daily operating schedule of 24 hours, the maximum turbine fuel consumption rate of 492,290 SCF/hour, the natural gas higher heating value of 1,020 BTU/SCF, and the natural gas F-Factor of 8,710 DSCF/MMBTU, the units' SO_X emission concentration is calculated as follows:

= (33.8 lb/day) * (1 day/24 hr) * (1 lb-mole/64 lb SO_2) * (385 $SCF_{EXHAUST}$/lb-mole) * (1 MMBTU/8,710 $SCF_{EXHAUST}$) * (10^6 BTU/1 MMBTU) * (1 SCF_{FUEL}/1,020 BTU) * (1 hr/492,290 SCF_{FUEL})* 100 % = 0.0002% SO_X

Subsuming Permit Condition

The SO_X emissions from the two combustion turbines of P-45-02(a1) shall not exceed 33.8 lb/day, 2,511 lb/1st calendar quarter, 2,511 lb/2nd calendar quarter, 2,511 lb/3rd calendar quarter, 2,511 lb/4th calendar quarter, and 5.02 tons/year. [District Rules 2.12, 2.16, and 3.4, and 40 CFR Part 60.333(a)/C-06-66]

Rule Requirement #4 - Fuel Sulfur Content

Part 60.333(b) prohibits turbines from burning fuel with sulfur contents in excess of 0.8% by weight. The section reads:

> *"No owner or operator subject to the provisions of this subpart shall burn in any stationary gas turbine any fuel which contains sulfur in excess of 0.8% by weight."*

Streamlining Demonstration: When ATC C-06-66 was issued, the District used the provisions of District Rule 3.4, Section 402 (a) to implement a more stringent fuel sulfur content on the turbines of P-45-02(a1). As shown below, the 1 grain per 100 standard cubic foot of gas limit (based on Rule 3.4), is more stringent, and therefore subsumes, the requirements of Part 60.333(b).

= (1 grain S/100 SCF) * (1 lb/7,000 grains) * (1 lb-mole/64 lb S) * (385 SCF/lb-mole) * 100% = 0.086% by weight

Streamlined Permit Condition

The turbines shall be fired only on natural gas with a total sulfur content not exceeding 1 grain/100 standard cubic foot of gas. [District Rule 3.4, §409.2(a) and 40 CFR Part 60.333(b)/C-06-66]

Rule Requirement #5 - Sulfur Fuel Content

Part 60.334(h)(1)(previously Part 60.334(b)) requires that the sulfur content of the fuel fired in the turbines be monitored on an approved custom schedule. The sections read:

60.334(h)(1) *"Shall monitor the total sulfur content of the fuel being fired in the turbine..."*

Streamlining Demonstration: When ATC C-06-66 was issued, the District used the provisions of District Rule 3.4, Section 402, to streamline the sulfur and nitrogen monitoring requirements of Parts 60.334(h)(1) and (h)(2) into a single condition that also requires the monitoring of the fuel's higher heating value. The condition also establishes a quarterly monitoring frequency for all three parameters.

Streamlined Permit Condition

The Permit Holder shall analyze the fuel's higher heating value (wet basis), and the total sulfur and nitrogen content of the fuel gas on a quarterly basis. [District Rule 3.4 and 40 CFR Part 60.334(h)/C-06-66]

Rule Requirement #6 - Nitrogen Fuel Content

Part 60.334(h)(1) and (h)(2) (previously Part 60.334(b)) require that the sulfur and nitrogen contents of the fuel fired in the turbines be monitored on an approved custom schedule. The sections read:

60.334(h)(2) *"Shall monitor the nitrogen content of the fuel combusted in the turbine..."*

Streamlining Demonstration: As discussed above for Requirement #5, Rule 3.4 has been used to streamline the fuel monitoring requirements of Parts 60.334(h)(1) and (h)(2).

Streamlined Permit Condition

The Permit Holder shall analyze the fuel's higher heating value (wet basis), and the total sulfur and nitrogen content of the fuel gas on a quarterly basis. [District Rule 3.4 and 40 CFR Part 60.334(h)/C-06-66]

Rule Requirement #7 - Monitoring of Operations

Part 60.334(c) reads:

> *"For any turbine that commenced construction, reconstruction or modification after October 3, 1977, but before July 8, 2004, and which does not use steam or water injection to control NO_x emissions, the owner or operator may, but is not required to, for purposes of determining excess emissions, use a CEMS that meets the requirements of paragraph (b) of this section."*

Where Part 60.334(b)(3)(iii) reads:

> *"If the owner or operator has installed a NO_x CEMS to meet the requirements of part 75 of this chapter, and is continuing to meet the ongoing requirements of part 75 of this chapter, the CEMS may be used to meet the requirements of this section, except that the missing data substitution methodology provided for at 40 CFR part 75, subpart D, is not required for purposes of identifying excess emissions."*

Streamlining Demonstration: Per Part 60.334(b)(3)(iii) and (c), an affected acid rain unit that uses a NO_X CEMS to meet the ongoing requirements of Part 75 can be used to meet the requirements of Part 60 - Subpart GG. As explained in U.S. EPA Reviewer Steve Frey in an email dated June 9, 2010 (see file), "the NSPS Subpart GG monitoring requirements do not actually require a gas turbine with a CEMs to conduct [40 CFR Part 60] Appendix F QA/QC. Also, 60.334(b) (3)(iii) provides that a Part 75 CEMs nay [*sic*] be used to satisfy the requirements of Subpart GG. So, the bottom line answer is that it is only the Districts permit condition that requires the facility to conduct Appendix F and the quarterly CGAs. I believe the District should have the right to interpret their requirement as they see appropriate for this issue." Therefore, the District's decision to require the RATA requirements of 40 CFR Part 75 - Appendix F, instead of the RATA requirements of 40 CFR Part 60 - Appendix F, does not represent a relaxation of the RATA requirements. The streamlined condition also includes the Part 72 definition of "quality assurance operating quarter" and minimum RATA testing of at least once every twenty-four (24) consecutive calendar months. Lastly, the streamlined condition expands the RATA requirement to apply to the CO, NO_X, and O_2 CEMS.

Related Requirements from other Rules:
See Rule Requirement #5 of Part 60 - Appendix F, for rule language.
See Rule Requirement #3 of Part 72 for rule language.
See Rule Requirement #2 of Part 75 - Appendix B, for rule language.

Streamlined Permit Condition

The Permit Holder shall perform a RATA of the CO, NO_X and O_2 CEMS at least once every four (4) successive quality assurance (QA) operating quarters (as defined by 40 CFR Part 72.2, at least 168 unit operating hours) or at least once every twenty four (24) consecutive calendar months, whichever is more stringent. The RATA shall be performed in accordance with 40 CFR Part 75 - Appendix B (Quality Assurance and

Quality Control Procedures). [District Rule 3.4, 40 CFR Part 60 - Appendix F, Section 5.1.1 and 40 CFR Part 75 - Appendix F, Section 2.3.1.1/C-06-66]

40 CFR PART 60 - SUBPART IIII Standards of Performance for Stationary Compression Ignition IC Engines

Rule Description

This subpart establishes emission limitations for manufacturers, owners, and operators of stationary compression ignition IC engines.

Compliance Status

This subpart applies to any compression ignition IC engine with displacement of 30 liters or less, and that was purchased for use, reconstructed, or commenced operation after July 11, 2005. The diesel fired IC engine of P-44-02 is used to drive an emergency fire pump and has a maximum displacement of 4.5 liters. However, the engine began operation on June 1, 2002, and is therefore not subject to the requirements of the subpart.

Permit Condition

No permit condition required.

40 CFR PART 60 - SUBPART JJJJ Standards of Performance for Stationary Spark Ignition IC Engines

Rule Description

This subpart establishes emission limitations for manufacturers, owners, and operators of stationary spark ignition IC engines.

Compliance Status

This subpart applies to any emergency spark ignition IC engine with maximum engine power greater than 25 HP, that is fired on gasoline or liquified petroleum gas, and that was purchased for use, reconstructed, or commenced operation after January 1, 2009. Since the emergency IC engine of P-44-02 is fired on diesel fuel, it is therefore not subject to the requirements of the subpart.

Permit Condition

No permit condition required.

40 CFR PART 60 - SUBPART KKKK Standards of Performance for Stationary Combustion Turbines

Rule Description

This subpart contains emission guidelines for all stationary gas turbines with a heat input at peak load equal to or greater than 10.7 giga joules (J) per hour (or 10 MMBTU/hr - based on the lower heating value of the fuel being fired), which commenced construction, modification, or reconstruction after February 18, 2005.

Compliance Status

The subpart does not apply to the combustion turbines of P-45-02(a1) since the units were installed prior to the applicability date, and the facility has not undergone any type of modification or reconstruction since then.

Permit Condition

No permit condition required.

40 CFR PART 60 - APPENDIX B Performance Specifications

Rule Description

This appendix contains performance specifications for CEMS and continuous opacity monitoring systems (COMS) used to specifically comply with the requirements of 40 CFR Part 60 requirements.

Compliance Status

The source is currently in compliance with the requirements of the subpart. The subpart is referenced by conditions of the permit, however, no specific permit condition is otherwise needed.

Permit Condition

No permit condition required.

40 CFR PART 60 - APPENDIX F Quality Assurance Procedures

Rule Description

This appendix establishes quality control (QC) and quality assurance (QA) procedures required to evaluate the effectiveness of the data produced by a CEMS being used for

determining compliance with the emission standards on a continuous basis under the provisions of 40 CFR Part 60.

Compliance Status

The source is currently in compliance with the requirements of the subpart.

Rule Requirement #1 - Quality Control Procedures

Section 3 of Procedure 1 requires that the source develop and implement a Quality Control (QC) program. The section reads:

"Each source owner or operator must develop and implement a QC program..."

Streamlining Demonstration: The source is considered an acid rain unit that is subject to the provisions of 40 CFR Parts 60, 72, 73, and 75. Although not contained in PTO P-45-02(a1), the overlapping requirements of Part 60 - Appendix F and Part 75 - Appendix B can be streamlined into a single requirement since the Part 60 requirements are not more stringent than the Part 75 requirements. Also, this streamlined requirement subsumes the corresponding quality control/quality assurance requirements of ATC C-06-66, Condition 25 (PTO P-45-02(a1), Condition 30).

Related Requirements from other Regulations:

Part 75 - Appendix B, Section 1 reads:

"Develop and implement a quality assurance/quality control (QA/QC) program for the continuous emission monitoring systems..."

ATC C-06-66, Condition 25 reads:

"A written quality assurance (QA) program shall be established in accordance with 40 CFR Part 60, Appendix B (Performance Specifications) and 40 CFR Part 60, Appendix F (Quality Assurance Procedures). [40 CFR Part 60, Appendix B and Appendix F]"

Streamlined Permit Condition

A written quality assurance (QA) program shall be established in accordance with 40 CFR Part 60 - Appendix F and 40 CFR Part 75 - Appendix B. [40 CFR Part 60 - Appendix F, Section 3 and 40 CFR Part 75 - Appendix B, Section 1]

Rule Requirement #2 - CEMS Parameter Monitoring and Recording

Section 4.1 of Procedure 1 establishes the frequency at which the calibration drift checks are to be performed. The section reads:

"... source owners and operators of CEMS must check, record, and quantify the CD at two concentration values at least once daily (approximately 24 hours) in accordance with the method prescribed by the manufacturer. The CEMS calibration must, as minimum, be adjusted whenever the daily zero (or low-level) CD or the daily high-level CD exceeds two times the limits of the applicable PS's in appendix B of this regulation."

Streamlining Demonstration: Because the two turbines of P-45-02(a1) are considered peaking units (operated on an on-call basis) and do not operate everyday to provide baseline power, the District has streamlined the Section 4.1 requirement to include the "unit operating day" definition of 40 CFR Part 72.2. The streamlined requirement is no less stringent, since it requires that the source perform the required checks on days that the turbines have operated, but allows the source to forgo these checks on days that the turbines have not.

Related Requirement from other Rules:
Part 72.2defines "unit operating day" as:

"Unit operating day means a calendar day in which a unit combusts any fuel."

Streamlined Permit Condition

The CEMS is required to quantify and record the calibration drift (CD) at two concentration values at least once every unit operating day (as defined by 40 CFR Part 72.2, any day that the unit combusts fuel) in accordance with the method prescribed by the manufacturer. The CEMS calibration must, as minimum, be adjusted whenever the daily zero (or low-level) CD or the daily high-level CD exceeds two times (2x) the limits of the applicable Performance Standards listed in Appendix B of 40 CFR Part 60. [40 CFR 60 - Appendix F, Procedure 1, Section 4.1 and Part 72.2]

Rule Requirement #3 (Permit Condition) - Allowable Calibration Drift

If either the zero (or low-level) or high-level calibration drift (CD) result exceeds twice (2x) the applicable drift specification for five (5), consecutive daily periods, the CEMS is out-of-control. If either the zero (or low-level) or high-level CD result exceeds four times (4x) the applicable drift specification (listed in Appendix B of 40 CFR Part 60) during any CD check, the CEMS is out-of-control. If the CEMS is out-of-control, take necessary action. Following corrective action, repeat the CD checks. [40 CFR 60 - Appendix F, Procedure 1, Section 4.3]

Rule Requirement #4 (Permit Condition) - Out-of-Control CEMS

During the period that the CEMS is out-of-control (as defined in Procedure 1, Section 4.3.1 of Appendix F), the CEMS data may not be used in calculating emission compliance or be counted towards meeting the minimum data availability as required and described in any applicable subparts. [40 CFR 60 - Appendix F, Procedure 1, Section 4.3.2]

Rule Requirement #5 - Relative Accuracy Test Audit

Section 5.1.1 of Procedure 1 establishes the RATA frequency for affected units. The section reads:

"The RATA must be conducted at least once every four calendar quarters, except as otherwise noted in section 5.1.4 of this appendix. Conduct the

RATA as described for the RA test procedure in the applicable PS (Performance Specification) in Appendix B (e.g., PS 2 for SO_2 and NO_X). In addition, analyze the appropriate performance audit samples received from EPA as described in the applicable sampling methods (e.g., Methods 6 and 7)."

Streamlining Demonstration: As previously discussed in Rule Requirement #7 of Part 60 - Subpart GG, the District's decision to require the RATA requirements of 40 CFR Part 75 - Appendix F, instead of the RATA requirements of 40 CFR Part 60 - Appendix F, does not represent a relaxation of the RATA requirements since under U.S. EPA's direction the requirements of Part 60 - Appendix F are not explicitly required by the subpart. This streamlined condition also includes the Part 72 definition of "quality assurance operating quarter" and minimum RATA testing of at least once every twenty-four (24) consecutive calendar months. Lastly, the streamlined condition expands the RATA requirement to apply to the CO, NO_X, and O_2 CEMS.

Related Requirements from other Rules:
See Rule Requirement #7 of Part 60 - Subpart GG, for rule language.
See Rule Requirement #3 of Part 72 for rule language.
See Rule Requirement #2 of Part 75 - Appendix B, for rule language.

Streamlined Permit Condition

The Permit Holder shall perform a RATA of the CO, NO_X and O_2 CEMS at least once every four (4) successive quality assurance (QA) operating quarters (as defined by 40 CFR Part 72.2, at least 168 unit operating hours) or at least once every twenty four (24) consecutive calendar months, whichever is more stringent. The RATA shall be performed in accordance with 40 CFR Part 75 - Appendix B (Quality Assurance and Quality Control Procedures). [District Rule 3.4, 40 CFR Part 60 - Appendix F, Section 5.1.1 and 40 CFR Part 75 - Appendix F, Section 2.3.1.1/C-06-66]

Rule Requirement #6 - CEMS Quarterly Audits

Section 5.1 of Procedure 1 establishes the general auditing requirements as:

"Each CEMS must be audited at least once each calendar quarter. Successive quarterly audits shall occur no closer than 2 months. The audits shall be conducted as follows:"

Section 5.1.2 of Procedure 1 establishes the CEMS quarterly audit requirements. The section reads:

"If applicable, a CGA (Cylinder Gas Audit) may be conducted in three of four calendar quarters, but in no more than three quarters in succession."

Streamlining Demonstration: The District streamlined the overlapping non-RATA audit requirements of Part 60 - Appendix F and Part 75 - Appendix B into a single condition. A requirement from Rule 3.4 was also included in order to allow the Part 75 linearity audits to satisfy the Part 60 cylinder gas audits.

As explained in U.S. EPA Reviewer Steve Frey in an email dated June 9, 2010, "the NSPS Subpart GG monitoring requirements do not actually require a gas turbine with a CEMs to conduct Appendix F QA/QC. Also, 60.334(b) (3)(iii) provides that a Part 75 CEMs nay [*sic*] be used to satisfy the requirements of Subpart GG. So, the bottom line answer is that it is only the Districts permit condition that requires the facility to conduct Appendix F and the quarterly CGAs. I believe the District should have the right to interpret their requirement as they see appropriate for this issue." His email further states, "I recommend that permits require both Part 75 and Part 60 Appendix F and that the most rigorous combination of the 2 be met by the CEMs. I allow the substitution of the linearities for CGAs, since EPA beeves [*sic*] these are the better QA check, but if the facility insists that Part 75 exempts them from the linearity, then it still must conduct a CGA to satisfy Appendix F."

Related Requirement from other Regulations:
See Rule Requirement #3 of Part 75 - Appendix B, for rule language.

Streamlined Permit Condition

Each CEMS must be audited at least once every calendar quarter that a RATA is not performed, either with a cylinder gas audit (performed in accordance with 40 CFR Part 60 – Appendix F) or with a linearity test (performed in accordance with 40 CFR Part 75 – Appendix B). Successive quarterly audits shall occur no closer than two (2) months. In any calendar quarter which qualifies as QA operating quarter, the audit shall be a linearity test. In every other calendar quarter, the audit shall be a CGA. [District Rule 3.4, 40 CFR Part 60 - Appendix F, Section 5.1.2, and 40 CFR Part 75 - Appendix B, Section 2.2.1]

Rule Requirement #7 (Permit Condition) - Quality Control Procedures Revision

Whenever excessive audit inaccuracies (as defined in Section 5.2.3 of Appendix F, Procedure 1) occur for two (2) consecutive quarters, the source owner or operator must revise the quality control (QC) procedures or modify or replace the CEMS. [40 CFR 60 - Appendix F, Procedure 1, Section 5.3]

40 CFR PART 63 - SUBPART ZZZZ National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating IC Engines

Rule Description

This subpart establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating IC engines located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission and operating limitations.

Compliance Status

This subpart applies to all engines that: (a) have maximum horsepower rating at or above 500 BHP; and (b) operate at a major source of hazardous air pollutants (HAPs). Because the emergency IC engine operating under P-44-02 has a maximum rating less than 500 BHP, the engine is not subject to the requirements of this subpart.

Permit Condition

No permit condition required.

40 CFR PART 64 Compliance Assurance Monitoring

Rule Description

This subpart provides guidelines for developing a compliance assurance monitoring (CAM) plan. The CAM plan requires that a facility monitor the appropriate parameters of a process or its control equipment, and/or measure the process' actual emissions, so as to ensure emission compliance on an ongoing basis.

CAM requirements are pollutant specific and apply to any pollutant emissions unit at a major source that is required to obtain a Part 70 permit which satisfies all of the following:

a. The unit is subject to an emission limit or standard for an applicable regulated air pollutant;
b. The unit uses a control device to achieve compliance with any such emission limitation or standard; and
c. The unit's pre-control device potential to emit of an applicable regulated pollutant is greater than or equal to that pollutants major source threshold.

Compliance Status

The emergency engine of P-44-02 and the two combustion turbine's of P-45-02(a1) are not subject to the requirements of this subpart based on its applicability requirements.

Rule Requirement #1 - CAM Applicability

The CAM plan requirements are pollutant specific, and apply to emission units equipped with pollutant specific control devices (defined art 64.1). For simplicity, the CAM applicability determinations for the five pollutants of the emergency engine of P-44-02 have been grouped together, while separate evaluations have been conducted for each of the pollutants of the combustion turbines of P-45-02(a1).

Applicability Determination for P-44-02 (All Pollutants): The emergency engine of P-44-02 is not subject to the requirements of this subpart. As shown below, none of the findings can be made for any of the five criteria pollutants.

a. The emergency IC engine is not subject to the emission standards of any District Rule for any pollutant;
b. The IC engine is not equipped with an emission control device; and
c. The IC engine does not have a potential to emit for any criteria or hazardous air pollutant equal to or greater than the major source thresholds.

Permit Condition of P-44-02

No permit condition required.

Applicability Determination for P-45-02(a1) (All Pollutants): As stated by U.S. EPA in Response 4(b) in the "Frequently Asked Questions Concerning the Compliance Assurance Monitoring Rule," acid rain units are excluded from the CAM rule because the CAM requirements are "believed to be redundant for these units." As such, the CAM requirements do not apply to the two combustion turbines of P-45-02(a1).

Permit Condition of P-45-02(a1)

No permit condition required.

40 CFR PART 72 Acid Rain Program

Rule Description

This subpart established provisions of the Acid Rain Program for certain acid rain units (fossil fuel fired power generation facilities). The provisions of the rule include the Acid Rain Permit requirements, SO_x and NO_x monitoring requirements, quality assurance and quality control requirements, and recordkeeping and reporting requirements.

Compliance Status

The source submitted an acid rain permit application to the EPA in January 2005 (see file), but to date no specific Title IV permit has been issued for the facility. The facility has therefore been complying with the provisions of 40 CFR Part 72.9 as contained in their original acid rain application.

Rule Requirement #1 - Acid Rain Unit Applicability

Section 72.1(a) reads:

> *"The purpose of this part is to establish certain general provisions and the operating permit program requirements for affected sources and affected units under the Acid Rain Program, pursuant to title IV of the Clean Air Act, 42*

U.S.C. 7401, et seq., as amended by Public Law 101–549 (November 15, 1990).“

Streamlining Demonstration: As part of this Title V permit renewal, the District will issue the site's Title IV permit as an appendix to the Title V operating permit. Per the provisions of District Rule 3.8, Section 302.19, the acid rain operating permit will include all of the applicable requirements of 40 CFR Part 72.9 (Standard Requirements). As such, the acid rain specific conditions of 40 CFR Part 72 will be included as Appendix A to this proposed Title V permit (see file). When ATC C-06-66 was issued, the District placed a single streamlined condition requiring compliance with both Part 72 and Part 73 on the permit.

Streamlined Permit Condition

The Permit Holder shall comply with the applicable requirements of 40 CFR Part 72 (Acid Rain Program) and Part 73 (Sulfur Dioxide Allowance System). [40 CFR Part 72 and Part 73/C-06-66]

Rule Requirement #2 - Unit Operating Day

Part 72.2defines “unit operating day” as:

“Unit operating day means a calendar day in which a unit combusts any fuel.”

Streamlining Demonstration: Because the two turbines of P-45-02(a1) are considered peaking units (operated on an on-call basis) and do not operate everyday to provide baseline power, the District has streamlined the requirement of Section 4.1 of Procedure 1 of 40 CFR Part 60 - Appendix F to include the “unit operating day” definition of 40 CFR Part 72.2. The streamlined requirement is no less stringent, since it requires that the source perform the required checks on days that the turbines have operated, but allows the source to forgo these checks on days that the turbines have not.

Related Requirement from other Rules:
See Rule Requirement #2 of Part 60 - Appendix F, for rule language.

Streamlined Permit Condition

The CEMS is required to quantify and record the calibration drift (CD) at two concentration values at least once every unit operating day (as defined by 40 CFR Part 72.2, any day that the unit combusts fuel) in accordance with the method prescribed by the manufacturer. The CEMS calibration must, as minimum, be adjusted whenever the daily zero (or low-level) CD or the daily high-level CD exceeds two times (2x) the limits of the applicable Performance Standards listed in Appendix B of 40 CFR Part 60. [40 CFR 60 - Appendix F, Procedure 1, Section 4.1 and Part 72.2]

Rule Requirement #3 - Quality Assurance Operating Quarter

Part 72.2defines quality assurance (QA) operating quarter as:

> *"Q*A operating quarter means a calendar quarter in which there are at least 168 unit operating hours (as defined in this section) or, for a common stack or bypass stack, a calendar quarter in which there are at least 168 stack operating hours (as defined in this section)."

Streamlining Demonstration: As previously discussed in detail in Rule Requirement #7 of Part 60 - Subpart G, the streamlined condition includes the definition of a "QA operating quarter." The streamline condition also contains requirements of Rule 3.4 and Part 75 - Appendix B, and subsumes the RATA requirements of Part 60 - Appendix F.

Related Requirements from other Rules:
See Rule Requirement #7 of Part 60 - Subpart GG, for rule language.
See Rule Requirement #5 of Part 60 - Appendix F, for rule language.
See Rule Requirement #2 of Part 75 - Appendix B, for rule language.

Streamlined Permit Condition

The Permit Holder shall perform a RATA of the CO, NO_X and O_2 CEMS at least once every four (4) successive quality assurance (QA) operating quarters (as defined by 40 CFR Part 72.2, at least 168 unit operating hours) or at least once every twenty four (24) consecutive calendar months, whichever is more stringent. The RATA shall be performed in accordance with 40 CFR Part 75 - Appendix B (Quality Assurance and Quality Control Procedures). [District Rule 3.4, 40 CFR Part 60 - Appendix F, Section 5.1.1 and 40 CFR Part 75 - Appendix F, Section 2.3.1.1/C-06-66]

40 CFR PART 73 Sulfur Dioxide Allowance System

Rule Description

This subpart established provisions of the Acid Rain Program for certain acid rain units (fossil fuel fired power generation facilities). The provisions of subpart include the allocation, tracking, holding and transfer of SO_2 allowances for affected sources.

Compliance Status

The source is currently in compliance with the requirements of this section. As discussed previously, the District has prepared the source's Title IV operating permit and is included as Appendix A to this proposed Title V operating permit.

Streamlining Demonstration: The District placed a single streamlined condition requiring compliance with both Part 72 and Part 73 on the permit.

Streamlined Permit Condition

The Permit Holder shall comply with the applicable requirements of 40 CFR Part 72 (Acid Rain Program) and Part 73 (Sulfur Dioxide Allowance System). [40 CFR Part 72 and Part 73/C-06-66]

40 CFR PART 74 SO_2 Opt-In

Rule Description

This subpart pertains to fossil fuel burning units that are not subject to the requirements of Part 72, that wish to be participants in the SO_2 allocation program.

Compliance Status

As discussed above, the source is already subject to the requirements of Part 73, therefore the requirements of this part do not apply.

Permit Condition

No permit condition necessary.

40 CFR PART 75 Continuous Emission Monitoring

Rule Description

This rule provides specific requirements for the design, performance, and installation of a CEMS for acid rain units. The regulation is intended to customize and compliment the requirements of 40 CFR Part 60 - Appendix B and F for acid rain units.

Compliance Status

As required by 40 CFR Part 75, the source is required to follow guidelines from this section when installing, calibrating, maintaining and operating the CEMs. The source is currently in compliance with this section.

Rule Requirement #1 - CEMS Installation and Maintenance

Part 75.1(b)(1) of the rule establishes installation and maintenance requirements for the CEMS (see Rule Requirement #2 of Rule 2.34 for section language).

Streamlining Demonstration: As previously discussed for Requirement #2 of Rule 2.34, the requirements of Rule 2.34, and 40 CFR Part 60.13 and Part 75.1 have been streamlined into a single condition.

Streamlined Permit Condition

The Permit Holder shall install and maintain a CEMS for CO, NO_X, and O_2 in the exhaust gas stack. The CEMS shall comply with the requirements of 40 CFR Part 60 - Appendices B and F, and 40 CFR Part 75 - Appendices A and B, and shall be capable of monitoring concentrations and mass emissions during normal operating conditions and during start-up and shutdown periods. [District Rule 2.34, §501.1, 40 CFR Part 60.13(a) and Part 75.1(b)/C-06-66]

Rule Requirement #2 (Permit Condition) - General Compliance

The Permit Holder shall comply with the applicable requirements of 40 CFR Part 75 (Continuous Emission Monitoring). [40 CFR Part 75/C-06-66]

40 CFR PART 75 - APPENDIX B Quality Assurance and Quality Control Procedures

Rule Description

This appendix establishes quality control and quality assurance procedures required to evaluate the effectiveness of the data produced by a CEMS being used for determining compliance with the emission standards on a continuous basis under the provisions of 40 CFR Part 75.

Compliance Status

The source is currently in compliance with the requirements of the subpart.

Rule Requirement #1 - Quality Control Procedures

Part 75 - Appendix B, Section 1 reads:

> *"Develop and implement a quality assurance/quality control (QA/QC) program for the continuous emission monitoring systems..."*

Streamlining Demonstration: As previously discussed for Rule Requirement #1 of Part 60 - Appendix F, the overlapping requirements of Part 60 - Appendix F and Part 75 - Appendix B have been streamlined into a single requirement since the Part 60 requirements are not more stringent than the Part 75 requirements.

Related Requirements from other Regulations:
See Rule Requirement #1 of Part 60 - Appendix F, for rule language.

Streamlined Permit Condition

A written quality assurance (QA) program shall be established in accordance with 40 CFR Part 60 - Appendix F and 40 CFR Part 75 - Appendix B. [40 CFR Part 60 - Appendix F, Section 3 and 40 CFR Part 75 - Appendix B, Section 1]

Rule Requirement #2 - Relative Accuracy Test Audit

Section 2.3.1.1 of Procedure 1 establishes the RATA frequency for affected units. An excerpt of the section reads:

> *"... RATAs shall be performed annually, i.e., once every four successive QA operating quarters (as defined in § 72.2 of this chapter). A calendar quarter that does not qualify as a QA operating quarter shall be excluded in determining the deadline for the next RATA. No more than eight successive calendar quarters shall elapse after the quarter in which a RATA was last performed without a subsequent RATA having been conducted."*

Streamlining Demonstration: As previously discussed for Rule Requirement #7 of Part 60 - Subpart GG, an affected acid rain unit that uses a NO_X CEMS to meet the ongoing requirements of Part 75 can be used to meet the requirements of Part 60 - Subpart GG. As explained in U.S. EPA Reviewer Steve Frey in an email dated June 9, 2010 (see file), "the NSPS Subpart GG monitoring requirements do not actually require a gas turbine with a CEMs to conduct [40 CFR Part 60] Appendix F QA/QC. Also, 60.334(b) (3)(iii) provides that a Part 75 CEMs nay [*sic*] be used to satisfy the requirements of Subpart GG. So, the bottom line answer is that it is only the Districts permit condition that requires the facility to conduct Appendix F and the quarterly CGAs. I believe the District should have the right to interpret their requirement as they see appropriate for this issue." Therefore, the District's decision to require the RATA requirements of 40 CFR Part 75 - Appendix F, instead of the RATA requirements of 40 CFR Part 60 - Appendix F, does not represent a relaxation of the RATA requirements. The streamlined condition also includes the Part 72 definition of "quality assurance operating quarter" and minimum RATA testing of at least once every twenty-four (24) consecutive calendar months. Lastly, the streamlined condition expands the RATA requirement to apply to the CO, NO_X, and O_2 CEMS.

Related Requirements from other Rules:
See Rule Requirement #7 of Part 60 - Subpart GG, for rule language.
See Rule Requirement #5 of Part 60 - Appendix F, for rule language.
See Rule Requirement #3 of Part 72 for rule language.

Streamlined Permit Condition

The Permit Holder shall perform a RATA of the CO, NO_X and O_2 CEMS at least once every four (4) successive quality assurance (QA) operating quarters (as defined by 40 CFR Part 72.2, at least 168 unit operating hours) or at least once every twenty four (24) consecutive calendar months, whichever is more stringent. The RATA shall be performed in accordance with 40 CFR Part 75 - Appendix B (Quality Assurance and Quality Control Procedures). [District Rule 3.4, 40 CFR Part 60 - Appendix F, Section 5.1.1 and 40 CFR Part 75 - Appendix F, Section 2.3.1.1/C-06-66]

Rule Requirement #3 - CEMS Quarterly Audit

Section 2.2.1 of Procedure 1 establishes the CEMS quarterly audit requirements. An excerpt of the section reads:

> *"... perform a linearity check, in accordance with the procedures in Section 6.2 of appendix A to this part, for each primary and redundant backup SO_2, Hg, and NO_X pollutant concentration monitor and each primary and redundant backup CO_2 or O_2 monitor... "*

Streamlining Demonstration: As previously discussed for Rule Requirement #6 of Part 60 - Appendix F, the District streamlined the overlapping non-RATA audit requirements of Part 60 - Appendix F and Part 75 - Appendix B into a single condition. The streamlined condition allows for the Part 75 linearity audit to satisfy the Part 60 cylinder gas audit requirements of the CEMS. The condition satisfies the guidance received from U.S. EPA Reviewer Steve Frey in an email dated June 9, 2010.

Related Requirement from other Regulations:
See Rule Requirement #6 of Part 60 - Appendix F, for rule language.

Streamlined Permit Condition

Each CEMS must be audited at least once every calendar quarter that a RATA is not performed, either with a cylinder gas audit (performed in accordance with 40 CFR Part 60 – Appendix F) or with a linearity test (performed in accordance with 40 CFR Part 75 – Appendix B). Successive quarterly audits shall occur no closer than two (2) months. In any calendar quarter which qualifies as QA operating quarter, the audit shall be a linearity test. In every other calendar quarter, the audit shall be a CGA. [District Rule 3.4, 40 CFR Part 60 - Appendix F, Section 5.1.2, and 40 CFR Part 75 - Appendix B, Section 2.2.1]

40 CFR PART 76 Acid Rain NO_X Emission Reduction Program

Rule Description

This subpart establishes NO_X emission limitations for coal fired utility units that subject to the provisions of Section 404, 405 or 409, of the CAA.

Compliance Status

The source is exempt from the requirements of the subpart, since the acid rain units are fired on natural gas.

Permit Condition

No permit condition required.

40 CFR PART 77 Excess Emission

Rule Description

This subpart sets forth the excess emissions offset planning and offset penalty requirements of Section 411 of the federal CAA.

Compliance Status

These requirements apply to the owners and operators of units operating under the Acid Rain Program. The source is currently in compliance with the applicable requirements of the subpart. Since the requirements pertain specifically to the exceedances under the Acid Rain Program, the following conditions will be included in the facility's Title IV permit (see Appendix A of Title V operating permit):

Rule Requirement #1 (Permit Condition) - Excess Emissions Offset Plan

The owners and operators of the acid rain unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR Part 77 (Excess Emissions). [40 CFR Part 72.9(e)(1)]

Rule Requirement #2 (Permit Condition) - Excess Emissions Provisions

The owners and operators of the acid rain unit that has excess emissions in any calendar year shall:

a. Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR Part 77; and
b. Comply with the terms of an approved offset plan, as required by 40 CFR Part 77. [40 CFR Part 72.9(e)(2)]

40 CFR PART 78 Appeal Procedures

Rule Description

This subpart sets forth the procedures to any final decision appeals made by the Administrator that pertain to the provisions of Subpart HHHH (Emission Guidelines and Compliance Times for Coal-Fired Electric Steam Generating Units) of 40 CFR Part 60, or 40 CFR Parts 72 through 77.

Compliance Status

The source is not currently subject to the requirements of the subpart since the acid rain unit is not coal-fired.

Permit Condition

No permit condition required.